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JANUARY 15, 1963
Volume 9 Number 1

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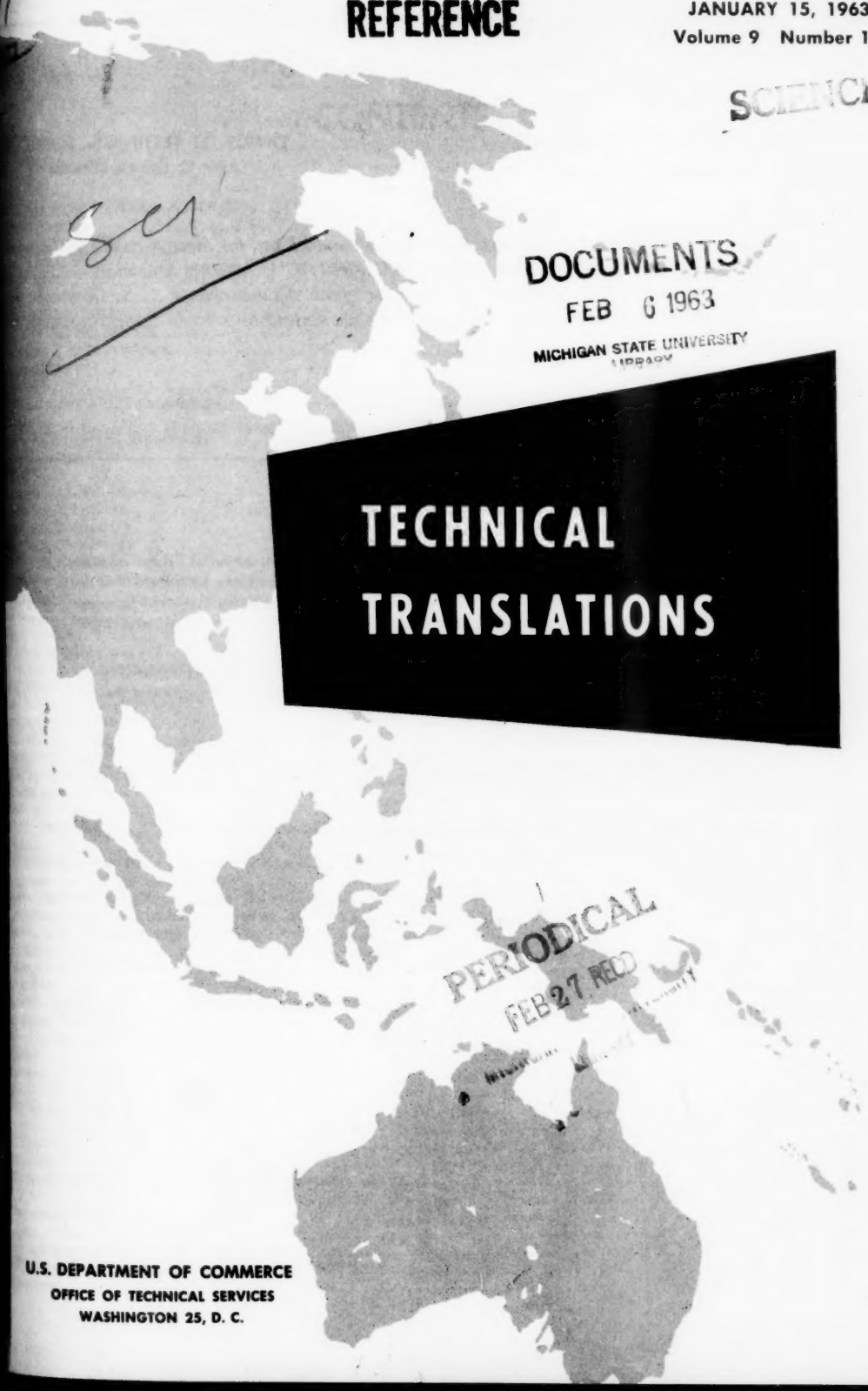

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TECHNICAL TRANSLATIONS

U.S. DEPARTMENT OF COMMERCE
Luther H. Hodges, *Secretary*

OFFICE OF TECHNICAL SERVICES
John C. Green, *Director*

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HOW TO ORDER TRANSLATIONS

The translations reported in this issue are arranged under the categories indicated in the Contents. The sub-groups of the categories are flexible and used only when there are several translations in a particular sub-group. When the subject of a sub-group is not included in the Contents, reference should be made to the general category into which it falls.

References to sources of original text are given as they appear on the translation, with sufficient editing to assure uniformity in citations.

Some of the translation notes for individual translations have been marked with the symbol (#) preceding the name of the journal. This symbol indicates that the particular journal is also translated cover-to-cover.

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Some of the translations available from OTS or SLA are supplied in printed form; others are Xerox reproductions. Prices are listed in each entry. Any reports available from OTS or SLA will be provided in microfilm (35mm) on request. The following prices are charged for microfilm: 1 through 20 pages, 80 cents minimum, and three cents per page for every page in excess of 20 pages. Translations ordered from other sources, unless specific information is given to the contrary in the journal entry, are in printed form.

SYMBOLS FOR SOURCES OF TRANSLATIONS

AC
A. Capelo
P. O. Box 46354
Hollywood 46
California

AGI
AGI Translations Office
American Geological Institute
2101 Constitution Avenue, N. W.
Washington 25, D. C.

AGS
American Geographical Society
Broadway at 156th Street
New York 32, New York

AGU
American Geophysical Union
1515 Massachusetts Avenue, N. W.
Washington 5, D. C.

AIBS
American Institute of Biological Sciences
2000 P Street, N. W.
Washington 6, D. C.

AIP
American Institute of Physics
335 East 45th Street
New York 17, New York

AIS
Argus Information Service
624 N. Eutaw Street
Baltimore 1, Maryland

AM
Acta Metallurgica
122 East 55th Street
New York 22, New York

ANSP
Academy of Natural Sciences of Philadelphia
19th Street and the Parkway
Philadelphia 3, Pennsylvania

API
Academic Press, Inc.
111 Fifth Avenue
New York 3, New York

ARS
American Rocket Society, Inc.
20th and Northampton Streets
Waston, Pennsylvania

ASLIB
ASLIB
3 Belgrave Square
London, S.W. 1, England

ATS
Associated Technical Services, Inc.
P. O. Box 271
East Orange, New Jersey

BIHR
Circulation Manager
Translations of the Beltone Institute for Hearing Research
2900 West 36th Street
Chicago 32, Illinois

BISI
British Iron & Steel Industry Translation Service
The Iron and Steel Institute
4, Grosvenor Gardens
London, S.W. 1, England

BWRA
British Welding Research Association
Abington Hall, Abington
Cambridge, England

CB
Consultants Bureau Enterprises, Inc.
227 West 17th Street
New York 11, New York

CCT
Consultants Custom Translations, Inc.
227 West 17th Street
New York 11, New York

CHP
Cleaver-Hume Press, Ltd.
31, Wright's Lane
London, W. 8, England

CIDNT
Centralny Instytut Dokumentacji Naukowo-Technicznej
Warszawa 12
Aleja Niepodleglosci 188
Poland

CSIRO
Commonwealth Scientific and Industrial Research Organization
Information Service
314 Albert Street
East Melbourne C. 2, Victoria
Australia

CTRA
The Librarian
The Coal Tar Research Association
Oxford Road
Gomersal, Leeds, England

CTS(Chem)
Chemical Translating Service
2243 Greer Road
Palo Alto, California

CTT
Columbia Technical Translations
5 Vermont Avenue
White Plains, New York

DI
Circulation Unit
Department of the Interior
Central Library
Room 1149
Washington 25, D. C.

EIS
Engineering Information Services
Kirkham, Preston, Lancashire,
England

ES
Erica Stux
584 Moreley Avenue
Akron 20, Ohio

ETC
European Translations Centre
Doelenstraat 101, Delft,
The Netherlands

FRI
Fulmer Research Institute, Ltd.
Stoke Poges,
Buckinghamshire,
England

FT
Faraday Translations
15 Park Row
New York 38, New York

GB
Gordon and Breach
Publishers, Inc.
150 Fifth Avenue
New York 11, New York

GPO
Superintendent of Documents
Government Printing Office
Washington 25, D. C.

HB
Henry Brutcher
P. O. Box 157
Altadena, California

HMSO
Her Majesty's Stationery Office
P. O. B. 569
London S. E. 1, England

HTCBN
Hungarian Trading Company for
Books and Newspapers "Kultura"
Budapest 62, P. O. Box 149

ICE
International Chemical Engineering
345 East 47th Street
New York 17, New York

INFOSERV
Infoserv
P. O. Box 217
West Hartford 7, Connecticut

IP
Interscience Publishers, Inc.
250 Fifth Avenue
New York 1, New York

K-H
Kresge-Hooker Science Library
Associates
Wayne State University
Detroit 2, Michigan

LAND-AIR
Land-Air, Inc.
Pacific Missile Range
Point Mugu, California

LC
Photoduplication Service
Publication Board Project
Library of Congress
Washington 25, D. C.

LSA
Literature Service Associates
Route 1
Bound Brook, New Jersey

MACL
Maclaren and Sons, Ltd.
Maclaren House
131 Great Suffolk Street
London, S. E. 1, England

MT
M. de O. Tollemache
Pennyford Cottage,
Burrington,
Umberleigh, Devon, England

NASA
National Aeronautics and Space
Administration
1520 H Street, N. W.
Washington 25, D. C.

NRCC
National Research Council,
Library
Ottawa 2, Canada

OB
Oliver & Boyd, Ltd.
Tweeddale Court
14 High Street
Edinburgh 1, Scotland

OSA
Optical Society of America, Inc.
33 University Road
Cambridge 38, Massachusetts

OTS
Office of Technical Services
Department of Commerce
Washington 25, D. C.
(Also available through
Department of Commerce
Field Offices)

PERA
The Information Manager
Production Engineering Research
Association
Melton Mowbray
Leicestershire, England

PLP
Plenum Press, Inc.
227 West 17th Street
New York 11, New York

PP
Pergamon Press
122 East 55th Street
New York 22, New York

PS
Primary Sources
11 Bleecker Street
New York 12, New York

RIA
Research International
Associates
1522 Connecticut Avenue, N. W.
Washington 6, D. C.

RIS
Research Information Service
40 East 23rd Street
New York 10, New York

SA
Seizaburo Aoki
1069 Minami Nakadori 2-chome
Fujisawa, Japan

SLA
SLA Translations Center
The John Crerar Library
35 West 33rd Street
Chicago 16, Illinois

STS
Scientific Translation Service
2104 Minoru Drive
Altadena, California

STT
SCIENTECH, Scientific and
Technical Translations
P.O. Box 3530
Cleveland 18, Ohio

TDL
Mr. John Wiley
Technical Development
Laboratories
P. O. Box 769
Savannah, Georgia

TF
Taylor and Francis, Ltd.
Red Lion Court, Fleet Street,
London, E.C. 4, England

TIB
Technische
Informationsbibliothek
Am Welfengarten 1,
Hannover. West Germany

TIC
Technical Information Company
Patents Department
Chancery House
Chancery Lane
London, W.C. 2, England

TTIS
Translation and Technical
Information Services
32, Manaton Road
London, S. E. 15, England

WBI
Warren Birkenhead, Inc.
901 Morthern Life Tower
Seattle 1, Washington

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SLA translations Center
The John Crerar Library
35 West 33rd Street
Chicago 16, Illinois

Carnegie Library of Pittsburgh
4400 Forbes Street
Pittsburgh 13, Pennsylvania

Georgia Institute of Technology
Price Gilbert Library
Atlanta, Georgia

MIT Libraries
Technical Reports, Room 14-E210
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

The Pennsylvania State University
University Park, Pennsylvania

University of California
Engineering Library
Los Angeles, California

University of Utah
University of Utah Library
Salt Lake City, Utah

Library of Congress
Washington 25, D. C.

UNITED STATES DEPARTMENT OF COMMERCE
OFFICE OF TECHNICAL SERVICES
WASHINGTON 25, D. C.

TECHNICAL TRANSLATIONS

Volume 9, Number 1 | Pages 1 - 112 | January 15, 1963

* Descriptors marked witn an asterik are listed in the subject index.

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ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 6. 19 Sep 62 [80]p. JPRS: 15354.
Order from OTS or SLA $7.60 62-33108

Consists of abstracts from 1962 issues of East European scientific and technical journals published in Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, and Rumania.

DESCRIPTORS: *Abstracts, *Scientific reports, *Bulgaria, *Czechoslovakia, *East Germany, *Hungary *Poland, *Rumania

AGRICULTURE

USSR INDUSTRIAL DEVELOPMENT: SOVIET TRACTORS AND AGRICULTURAL MACHINERY NO. 39. 2 Oct 62 [28]p. JPRS: 15537.
Order from OTS or SLA $2.60 62-33333

Trans. (some in part) of Mashinostroenie (USSR) [1962] no. 2, p. 104-105; no. 3, p. 87-90, 92-94; Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1962, no. 5, p. 65-70; and selected articles from 1962 issues of 3 Russian newspapers.

DESCRIPTORS: *Industrial production, *Agricultural machinery, *Tractors, Industrial plants, Industrial procurement, Beets, Transportation, Plants, Seeds.

Contents:
One more victory for the tractor assembly worker, by A. Veremeenko and M. Efimenko
The alarming messages, by A. Kozlov
Till the thunder rumbles
New machines for the mechanization of sugar-beet harvesting, by T. P. Kruglikov
To expedite the development of more improved farm machinery, by A. E. Tkachenko
Machines for harvesting bean crops, by E. I. Pritsker
New agricultural equipment, by I. P. Ivanchenko
Difficulties of the Kherson combine plant
Tractor transport in the current Seven-Year Plan, by S. F. Sergazin
The GSD-1.4 disc ridge seedbed forming planter, by L. A. Ivtodii
The SShN-3 planter, by G. F. Shpan'ko
PFSh-1.6 pickup-baler mounted on SSh-75 self-propelled chassis, by A. I. Gerasimov and G. N. Elkin.

USSR INDUSTRIAL DEVELOPMENT: SOVIET TRACTORS AND AGRICULTURAL MACHINERY NO. 40. 23 Oct 62 [20]p. JPRS: 15853.
Order from OTS or SLA $1.60 62-33602

Trans. of Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1962, no. 7, p. 57-66; and from Pravda (USSR) 1962, 20 July, p. 2; 27 July; Izvestiya (USSR) 1962, 13 July.

DESCRIPTORS: *Agriculture, *Production, *Agricultural machinery, *Tractors, Industrial research, Animals, *Industrial production, Supplies.

Contents:
Equipment in agricultural production, by V. I. Lozvoi
Minsk tractor plant production, by P. I. Boikov
Machinery for animal husbandry, by G. A. Lobanovskii
Why is the conveyer inoperative at the Lipetsk Plant, by M. Seepichev and I. Vinogradov
Supply problems of the Lipetsk Tractor Plant
The virgin lands await wide-swath windrowers, by K. Protsenko and G. Ragozin.

Andrés, L. E.
RECENT PROGRESS IN THE MANUFACTURE OF PHOSPHATED FERTILIZERS (Progrés dans la Fabrication des Engrais Phosphatés) tr. by Bertha P. Klenova. 26 Aug 55 [14]p. TVA [no.] 3481.
Order from OTS or SLA $1.60 60-23449

Trans. of Chimie et Industrie (France) 1955, v. 73 [no. 3] p. 531-540.

DESCRIPTORS: *Fertilizers, Manufacturing methods, *Phosphates, *Metallic compounds, Additives, Stabilization.

Ivanovskii, N. P.
INFLUENCE OF THE KIND OF POTASSIUM FERTILIZER ON THE HARVEST YIELD AND ON THE QUALITY OF TOBACCO. [1962] 9p.
Order from K-H $11.25 K-H 3084-a

Trans. of Tabak (USSR) 1953, v. 14, no. 2, p. 16-18.

DESCRIPTORS: *Fertilizers, *Potassium, Production, *Tobacco.

Szabo, Sandor.
METHOD AND ARRANGEMENT FOR DESTROYING, BY MEANS OF AN ELECTRIC CURRENT, PARASITIC INSECTS INFESTING VINES, tr. by L. H. 17 Aug 62, 3p.
Order from OTS or SLA $1.10 62-32920

Trans. of Hungarian patent 37,938, cl. X/b, appl. 22 July 06, pub. 5 Feb 07.

DESCRIPTORS: *Pest control, Insects, *Plants, *Electric currents, Soils.

Plant Cultivation

Cormier, M.
THE VARIOUS METHODS OF TOBACCO FERMENTATION. [1962] 6p.
Order from K-H $7.50 K-H 3169-a

Trans. of Rev[ue] Intern[ationale des] Tabacs (France) 1948, v. 23, p. 99-101.

DESCRIPTORS: *Tobacco, Fermentation.

Dorokhov, P. K. and Akimushkina, A. N.
VOLUMETRIC PROPERTIES OF FIBROUS TOBACCO AS A FUNCTION OF ITS FRACTIONAL COMPOSITION. [1962] 7p.
Order from K-H $8.75 K-H 11053-b

Trans. of [Tabak (USSR) 1960, v. 21, no. 2, p. 21-23]. Another trans. is available from OTS or SLA $1.10 as 61-20016 [1961] 7p.

DESCRIPTORS: *Tobacco, Fibers, Physical properties, Density, Fractionation, *Cigarettes, Preparation, Tests.

Komlossy, Antal.
ON ORIENTAL TOBACCOS. [1962].
Order from K-H $22.50 K-H 10969-a

Trans. of [Dohanyipar (Hungary) 1959, v. 1, no. 2, p. 1-7].
Another trans. if available from SLA $1.60 as 61-20774 [1961] 18p.

DESCRIPTORS: *Tobacco, *Plants, Growth.

For abstract see Technical Translations 7:717, 1962.

Lysov, V. N.
BIOLOGICAL AND ECONOMIC CHARACTERISTICS OF MILLET IN CHINA, AND IMPORTANCE OF ITS SELECTIVITY (Biologicheskie i Khozyaistvennye Osobennosti Obraztsov Prosa Kitaya i Ikh Selektsionnoe Znachenie). 20 July 61 [9]p. JPRS: 9667.
Order from OTS or SLA $1.10 61-27233

Trans. from Selektsiya i Semenovodstvo (USSR) 1961 [v. 26] no. 2.

DESCRIPTORS: *Cereals, Grasses, Biology, Economics, Food, Ecology, China

Pyriki, Constantin.
ON THE FERMENTATION OF TOBACCO. Communication 4. [1962] 20p.
Order from K-H $25.00 K-H 3046-b

Trans. of Zeitschrift f[ür] Lebensmittel-Untersuchung und-Forschung (West Germany) 1954, v. 98, p. 110-118.

DESCRIPTORS: *Tobacco, *Fermentation.

Trappenberg, R.
STUDIES OF MICROCLIMATIC EFFECTS OF ARTIFICIAL RAIN UPON TOBACCO CULTURES. [1962] 28p.
Order from K-H $35.00 K-H 3097 b

Trans. of Arch[iv für] Met[eorologie] Geoph[ysik und] Biokl[imatologie. Series] B: [Allgemeine und Biologische Klimatologie] (Austria) 1952, v. 4, no. 1, p. 65-84.

DESCRIPTORS: Climatic factors, *Artificial precipitation, *Tobacco, Growth.

Yoshii, Hajime, Wakimoto, Tetsu, and Kuwazuka, Shozo.
POLYPHENOLS IN THE RICE PLANT. [1962] 1p.
Order from K-H $1.25 K-H 6918-g

Trans. of Nihon Shokubutsu Byori Gakkaiho (Japan) 1957, v. 22, no. 1, p. 12.
Another trans. is available from SLA $1.10 as 61-10868 [1961] 1p.

DESCRIPTORS: *Rice, *Plants, *Phenols, Polymers.

For abstract see Technical Translations 7: 580, 1962.

Zimmermann, J.
TRITERPENES AND PIGMENTS IN FLOWERS AND FRUITS, I. [1962] 5p.
Order from K-H $6.25 K-H 3658

Trans. of Helvetica Chimica Acta (Switzerland) 1954 [v. 37] p. 332-334.

DESCRIPTORS: *Terpenes, *Plant pigments, *Plants, *Fruits.

ASTRONOMY

Esepkina, N. A.
EXPERIENCE OF ADJUSTING A LARGE RADIOTELESCOPE [Opyt Nastroyki Bol'shogo Radiotcleskopa]. 7 Mar 60 [6]p. 2 refs. USASIA SC-59e/59; JPRS: R-424-D.
Order from OTS or SLA $1.10 62-32764

Trans. of #Pribory i Tekhnika Eskperimenta (USSR) 1959, no. 2, p. 24-26.
Another trans, is available from OTS $0.50 as 60-21194 [1960] 4p.

DESCRIPTORS: Radio astronomy, Astronomy, Instrumentation, *Telescopes, Direction finding, Antennas, Antenna radiation patterns, Optical instruments

For abstract see Technical Translations 3: 692, 1960.

Khaykin, S. E. and Kaydanovskii, N. L.
NEW RADIOTELESCOPE WITH A HIGH RESOLVING POWER. [Novyi Radioteleskop Vysokoi Razreshayushche Sily]. 7 Mar 60 [11]p. 4 refs. USASIA SC-59d/59; JPRS: R-423-D.
Order from OTS or SLA $1.60 62-32765

Trans. of #Pribory i Tekhnika Eksperimenta (USSR) 1959, no. 2, p. 19-24.
Another trans. is available from OTS $0.50 as 60-21193 [1960] 11p.

DESCRIPTORS: Radio astronomy, Astronomy, Instrumentation, *Telescopes, Design, Reflectors, Resolution, Optical instruments

For abstract see Technical Translations 3: 691, 1960.

Kozik, S. M.
TABLE AND SCHEMATIC CHART OF SELECTED LUNAR OBJECTS, tr. by P. Basu. 1961 [34]p. [DSIR NLL] E.22990.
Order from PP $2.00

Trans. of mono. [Katalog i Skhematicheskaya Karta Izbrannykh Lunnykh Ob"ektov dlya Polnoluniya, Moscow, 1960, 30p.].

DESCRIPTORS: Astronomical data, *Moon, Maps, Tables.

Astrophysics

ATMOSPHERES OF VENUS AND MARS AND ON THE LUNAR SURFACE AND ATMOSPHERE: SUPPLEMENTARY REPORT. [1962] [20]p. 11 refs. AID rept. 62-97; AD-278 628.
Order from OTS or SLA $1.60 62-32103

DESCRIPTORS: *Planetary atmospheres, *Venus, *Mars *Moon, Surface properties, Space probes, Polarization, *Extraterrestrial geography, Ionosphere models, Astronautics, Temperature, Spectrographic analysis, Albedo (Astronomy), Photographic analysis, Rock, *Geogony, *Volcanoes, Colorimetric analysis.

BRIEF DATA ON SOVIET ARTIFICIAL EARTH SATELLITES, COSMIC SPACECRAFTS, AND COSMIC ROCKETS. [Nov 62] 3p.
Order from STS $4.60 STS Trans-6228

Trans. of Iskusstvennye Sputniki Zemli (USSR) 1962, v. 12, p. 3-5.

DESCRIPTORS: *Space flight, *Satellite vehicle research, *Rocket research, Ionosphere, Cosmic rays, Atmosphere, Moon, Radiation, Nuclei.

SOVIET-BLOC RESEARCH IN GEOPHYSICS, ASTRONOMY, AND SPACE, NO. 41. 15 Aug 62, 20p. JPRS: 14832.

Order from OTS $16.00/year 61-11147-41
foreign $20.00/year

DESCRIPTORS: *Geophysics, *Astronomy, *Astronautics, *Upper atmosphere, *Space probes, USSR, *Astrophysics, Meteorology, Oceanography.

Consists of news items and abstracts of scientific articles on astronomy, meteorology, oceanography, terrestrial geophysics, upper atmosphere and space research, and other miscellaneous subjects.

SOVIET-BLOC RESEARCH IN GEOPHYSICS, ASTRONOMY, AND SPACE, NO. 42. 31 Aug 62, 32p. JPRS: 15068.
Order from OTS $16.00/year 61-11147-42
foreign $20.00/year

DESCRIPTORS: *Geophysics, *Astronomy, *Astronautics, *Upper atmosphere, *Space probes, USSR, *Astrophysics, Meteorology, Oceanography.

Consists of news items and abstracts of scientific articles on astronomy, meteorology, oceanography, terrestrial geophysics, upper atmosphere and space research, and other miscellaneous subjects.

SOVIET-BLOC RESEARCH IN GEOPHYSICS, ASTRONOMY, AND SPACE, NO. 43 13 Sep 62, 12p. JPRS: 15253.

Order from OTS $16.00/year 61-11147-43
foreign $20.00/year

DESCRIPTORS: *Geophysics, *Astronomy, *Astronautics, *Upper atmosphere, *Space probes, USSR, *Astrophysics, Meteorology, Oceanography.

Consists of news items and abstracts of scientific articles on astronomy, meteorology, oceanography, terrestrial geophysics, upper atmosphere and space research, and other miscellaneous subjects.

SOVIET-BLOC RESEARCH IN GEOPHYSICS, ASTRONOMY, AND SPACE, NO. 44. 28 Sep 62, 27p. JPRS: 15496.

Order from OTS $16.00/year 61-11147-44
foreign $20.00/year

DESCRIPTORS: *Geophysics, *Astronomy, *Astronautics, *Upper atmosphere, *Space probes, USSR, *Astrophysics, Oceanography, Meteorology.

Consists of news items and abstracts of scientific articles on astronomy, meteorology, oceanography, terrestrial geophysics, upper atmosphere and space research, and other miscellaneous subjects.

SOVIET-BLOC RESEARCH IN GEOPHYSICS, ASTRONOMY, AND SPACE, NO. 45. 15 Oct 62, 24p. JPRS: 15719.
Order from OTS $16.00/year 61-11147-45
foreign $20.00/year

DESCRIPTORS: *Geophysics, *Astronomy, *Astronautics, *Upper atmosphere, *Space probes, USSR, *Astrophysics, Oceanography, Meteorology.

Consists of news items and abstracts of scientific articles on astronomy, meteorology, oceanography, terrestrial geophysics, upper atmosphere and space research, and other miscellaneous subjects.

Alekseev, V. M.
NOTES ON THE CRITERIA FOR HYPERBOLIC AND HYPERBOLIC-ELLIPTIC MOTION. Sep 62 [4]p. 5 refs.
Order from ARS in Its Journal, v. 32, no. 9, $3.00

Trans. of Moscow U. Vestnik. [Seriya 3: Fizika, Astronomiya] (USSR) 1961 [v. 16] no. 1, p. 67-75.

DESCRIPTORS: *Equations of motion, Particle trajectories, *Celestial mechanics, Mechanics, Inequalities, Differential equations.

Keirium-Markus, I. B., Kovalyov, E. E., and Uspensky, L. N.
MEASUREMENTS OF RADIATION DOSES ON THE SECOND, FOURTH, AND FIFTH COSMIC SPACECRAFT. [Nov 62] 4p. 8 refs.
Order from STS $6.25 STS Trans-K6230

Trans. of Iskusstvennye Sputniki Zemli (USSR) 1962, v. 12, p. 47-50.

DESCRIPTORS: *Rocket research, *Space flight, Spaceships, Radioactivity, Measurement.

Krotikov, V. D.
PRECISION MEASUREMENTS OF THE RADIO EMISSION OF THE MOON AT 9.6 cm WAVELENGTH (Pretsizionnoe Izmerenie Radioizlucheniya Luny na Volne 9.6 cm) tr. by A. Pingell. 20 Aug 62, 8p. 14 refs, NRL Trans. no. 913.
Order from OTS $0.50 62-11788

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii, Radiofizika (USSR) 1962, v. 5, no. 3, p. 604-606. Another trans. is available from OTS or SLA $23.50 in 62-33452, JPRS-15740, 16 Oct 62 [456]p.

DESCRIPTORS: *Moon, *Radio signals, *Radio astronomy, Extraterrestrial radio waves, Measurement, Errors, Temperature.

Measurements of radio emission of the moon were conducted at a horizontal polarization, by means of a radio telescope consisting of a 4 m parabolic reflector, which was beamed at by the open end of the waveguide, and of a modulation radiometer with a fluctuating threshold of sensitivity 0.4°K with time constant of 16 sec. The width of the antenna diagram at the half-level of intensity was 1° 40′ (the ordinate of the diagram on the lunar limb was equal to 0.93), therefore, the temperature under study was practically equal to the brightness temperature averaged over the disc. (Author)

Kurnosova, L. V., Razorenov, L. A., and Fradkin, M. I.
SHORT-LIVED INCREASE OF HEAVY NUCLEII INTENSITY DURING FLIGHT OF THIRD COSMIC SPACECRAFT. [Nov 62] 4p. 8 refs.
Order from STS $6.25 STS Trans-K6229

Trans. of Iskusstvennye Sputniki Zemli (USSR) 1962, v. 12, p. 31-34.

DESCRIPTORS: *Satellite vehicle research, *Space flight, Radioactivity, Nuclei, Radioactive decay, *Nuclear physics.

Molchanov, A. P.
METHOD OF MEASURING THE FLUX OF LUNAR AND SOLAR RADIO EMISSION, tr. by Astrid Werner. Sep 62 [2]p. 5 refs.
Order from ARS in Its Journal, v. 32, no. 9, $3.00

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Radiofizika (USSR) 1960, v. 3, no. 4, p. 722-723.

DESCRIPTORS: *Radio signals, *Radio astronomy, Moon, Sun, *Lunar probes, Telescopes, Calibration, Blackbody radiation, Temperature, Measurement.

Myachin, V. F.
CRITERION FOR CHANGING THE INTEGRATION STEP IN NUMERICAL INTEGRATION OF EQUATIONS OF CELESTIAL MECHANICS BY THE GENERALIZED RUNGE METHOD. Sep 62 [9]p. 2 refs.
Order from ARS in Its Journal, v. 32, no. 9, $3.00

Trans. of [Akademiya Nauk SSSR]. Institut Teoreticheskoi Astronomii. Byulleten', 1961, v. 8, no. 2(95) p. 134-152.

DESCRIPTORS: *Celestial mechanics, Mechanics, *Differential equations, *Integration, Numerical methods and procedures.

Savenko, I. A., Pisarenko, N. F. and others.
MEASUREMENTS OF THE ABSORBED DOSE ON SOVIET ORBITAL SPACECRAFT III. [Nov 62] 4p. 4 refs.
Order from STS $6.25 STS Trans-S6225

Trans. of Iskusstvennye Sputniki Zemli (USSR) 1962, v. 13, p. 81-85.

DESCRIPTORS: *Space flight, *Satellite vehicle research, Radioactivity, Absorption, Dosage.

Savenko, I. A., Shavrin, P. I., and Pisarenko, N. F.
SOFT CORPUSCULAR RADIATION AT AN ALTITUDE OF 320 KM IN THE LATITUDES NEAR THE EQUATOR. [Nov 62] 6p. 8 refs.
Order from STS $9.25 STS Trans-S6224

Trans. of Iskusstvennye Sputniki Zemli (USSR) 1962, v. 13, p. 75-81.

DESCRIPTORS: *Satellite vehicle research, *Geophysics, Radioactivity, High altitude.

Shafer, Y. G.
EFFECT OF A DECREASE IN SOLAR ACTIVITY ON THE COSMIC RAY INTENSITY FROM MEASUREMENTS ON GEOPHYSICAL ROCKETS IN 1958 AND 1960. [Nov 62] 4p. 6 refs.
Order from STS $6.25 STS Trans-S6226

Trans. of Iskusstvennye Sputniki Zemli (USSR) 1962, v. 13, p. 85-88.

DESCRIPTORS: *Rocket research, *Geophysics, *Cosmic rays, *Solar disturbances, Magnetic fields, Space probes.

Tatarskii, V. I.
INTERPRETATION OF OBSERVATIONS OF THE SCINTILLATION OF STARS AND REMOTE TERRESTRIAL LIGHT SOURCES. 3 May 62 [25]p. 19 refs. FTD-TT-61-355.
Order from OTS or SLA $2.60 62-25837

Unedited rough draft trans. of mono. [Trudy Soveshchaniya po Issledovaniyu Mertsaniya Zvezd, 18-20 June 58, Moscow/Leningrad, 1959] p. 7-25 and 60-62.

DESCRIPTORS: *Stars, *Light, Atmosphere, Turbulence, Electromagnetic waves, Propagation, Intensity, Visibility, Refractive index, Atmospheric refraction, Brightness, Astrophysics.

Troitskii, V. S.
THE EFFECT OF THE SUBSURFACE THERMAL FLUX OF THE MOON ON ITS RADIO EMISSION (Vliyanie Vnutrennogo Potoka Tepla Luny na Ee Radioizluchenie) tr. by A. Pingell. 17 Sep 62, 4p. 8 refs. N R L Trans. no. 912.
Order from OTS $0.50 62-11786

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Radiofizika (USSR) 1962, v. 5, no. 3, p. 602-603. Another trans. is available from OTS or SLA $23.50 in 62-33452, JPRS-15740, 16 Oct 62 [456]p.

DESCRIPTORS: *Moon, *Radio signals, Extraterrestrial radio waves, *Radio astronomy, Temperature, Thermal conductivity.

BEHAVIORAL SCIENCES

SELECTED MILITARY TRANSLATIONS ON EASTERN EUROPE (8). 19 Apr 61 [101]p. JPRS: 4539.
Order from OTS or SLA $9.10 62-19214

Trans. of Magyar Kozlony (Hungary) 1960, no. 60, p. 610; no. 112, p. 760-775; Przeglad Morski (Poland) 1960 [v. 13] no. 12, p. 36-44, 82-84, 105-110; Wojsko Ludowe (Poland) 1960, no. 12, p. 3-17, 40-47, 90-92; 1961, no. 1, p. 38-42; Skrzydlata Polska, 1960 [v. 16, no. 51/52] p. 12-14.

DESCRIPTORS: *Military personnel, Military medicine, National defense, *Hungary, Hydrographic office, Navigation, Ships, Pressure mines, Combat, Personnel, Training, Engineering personnel, Aviation personnel, Armed forces, *Poland, *Military training

Contents:
Health provisions for separated members of the armed forces
National defense law no. 4, 1960
Tables of contents, Przeglad Morski, 1960, v. 13, nos. 1-12
Cartographic issuances of the hydrographic bureau of the Polish navy
Ship's defense against pressure mines, by Narcyz Klatka
Tables of contents, Wojsko Ludowe, 1960, nos. 1-12
On some problems of the political apparatus in the tactical training of the troops, by Zenon Pawlak
Deliberations on the theme of political work during tactical exercises, by Marian Jurek
The past, the present, and the future of the engineer troops, by Stanislaw Soroka
Short history of experimental aviation workshops in Poland; Men in Airplanes, by Jerzy Swidzinski
Officer and comrade courts in the Polish armed forces; What problems and in what circumstances, by Stanislaw Mendyka.

Gasonov, Sh. M.
ESTABLISHMENT OF "HEALTH ZONES" IN THE BAKU CITY PARKS AND GARDENS. 16 Feb 62 [8]p. JPRS: 12664.
Order from OTS or SLA $1.10 62-19798

Trans. of Azerbaidzhanskii Meditsinskii Zhurnal (USSR) 1961, no. 7, p. 3-8.

DESCRIPTORS: *Health resorts, National Parks, Botanical gardens, *Recreation, Therapy, *Psychotherapy, Conditioned reflex, *Exercise, Preventive medicine, Climatic factors.

Kreyberg, M. J. A.
AN INVESTIGATION OF NORWEGIAN SMOKING HABITS. [1962] 24p.
Order from K-H $30.00 K-H 3359-c

Trans. of Tid[sskrift] for den Norske Laegeforening (Norway) 1954 [v. 74] no. 17, p. 549-554.

DESCRIPTORS: *Cigarettes, Tobacco, Smokes, Behavior, Norway, Applied psychology.

BIOLOGICAL SCIENCES

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 35 (BIOLOGY SERIES). 24 Oct 62 [18]p. JPRS: 15870.
Order from OTS or SLA $1.60 62-33595

Trans. of selected abstracts from Referativnyi Zhurnal Biologiya (USSR) 1961, no. 15.

DESCRIPTORS: *Abstracts, China, *Biology, Microbiology, Viruses, Morphology, Zoology, Physiology, Pathology, Tumors, Pharmacology

COMMUNIST CHINA'S SCIENCE AND TECHNOLOGY [SELECTED] TRANSLATIONS NO. 5. 22 Aug 62, 25p. JPRS: 14920.
Order from OTS $0.75 62-11735

Trans. of K'o Hsüeh T'ung Pao (Chinese People's Republic) 1962, no. 6, p. 12-14, 40 with table of contents and bibliographic information and excerpts of articles on p. 22, 35, 39; Kuang Ming Jih Pao (Chinese People's Republic) 1962, 29 June, p. 2; 5 July, p. 2.

DESCRIPTORS: Plants, *Drugs, *Chromosomes, Cells (Biology), *Anthropology, China, *Neurology, Chinese traditional medicine, *Forestry, *Meteorology, Genetics.

Contents:
Direction and method for the study of medicinal plants, by P'ei Chien [illegible], no. 1) (over)
Chromosome structure of Chinese race (preliminary rept.) by Hsiang Wei and others
Research on synthetic neurology, by Lu Yu-tao
Research of forest to weather regulating, by Hsieh Ya-ko.

DEFENSE FUNCTIONS OF THE ORGANISM. 23 Oct 62 [98]p. JPRS: 15842.
Order from OTS or SLA $8.60 62-33606

Trans. of Akademiya Meditsinskikh Nauk SSSR, Vestnik, 1962 [v. 17] no. 4, p. 5-26, 57-76, 82-96. ##Another trans. of (p. 7-26 and 82-93) are available in 62-33092, FTD-TT-62-963; 7 Aug 62 [82]p.

DESCRIPTORS: *Medicine, *Adaptation (Physiology), Resistance, *Clinical death, *Cells (Biology), *Immunization, *Genetics, Microbiology, Physiology.

Contents:
Introductory address by N. N. Blokhin, president of the Academy of Medical Sciences USSR
##The tasks of the Academy of Medical Sciences USSR in the light of the decisions of the Congress of the Communist Party of the Soviet Union (no. 22) by N. N. Blokhin
The general principles of the formation of the defense adaptations of the organism, by P. K. Anokhin
Cytophysiological mechanisms of immunogenesis, by P. F. Zdrovskii
Experimental biology and new concepts of immunogenesis, by N. N. Zhukov-Verezhnikov and others
Resistance of organisms as a genetic problem, by V. D. Timakov and others
##Discussions on the reports of the scientific section of the session of the problem of the defense functions of the organism
Concluding remarks on the scientific reports.

GENERAL MEETINGS OF THE DEPARTMENTS OF THE ACADEMY OF SCIENCES USSR (Na Obshchikh Sobraniyakh Otdelenii Akademiya Nauk SSSR). 20 Aug 62, 10p. Trans. A-1360.
Order from OTS or SLA $1.10 62-32592

Partial trans. (p. 65-68) of Akademiya Nauk SSSR. Vestnik, 1962, v. 32, no. 4, p. 56-81.
A complete trans. is available from OTS or SLA $3.60 as 62-32370 JPRS-14816, 13 Aug 62 [38]p.

DESCRIPTORS: *Conferences, Biology, Scientific research

GENERAL SCIENCE AND MISCELLANEOUS, INCLUDING METEOROLOGY, OCEANOGRAPHY, BIOLOGY, ASTROBIOLOGY, BOTANY, ZOOLOGY, MEDICAL SCIENCE, AEROMEDICINE, EDUCATION, FUELS, FUEL PRODUCTS, AND POWER NO. 4, P. 63-76 Series 6 of English Abstracts of Selected articles from Soviet Bloc and Mainland China Technical Journals. May 61, [14]p.
Order from OTS $9.00/6 issues 61-11145-4
foreign $11.25/6 issues

DESCRIPTORS: Scientific reports, Meteorology, *Oceanography, *Biology, *Medicine, *Fuels, Abstracts *China, Plants, Aviation medicine, Education, Power.

Consists of abstracts in English.

HYGIENE AND SANITATION, 1962 [VOL. 27] NO. 5: [SELECTED ARTICLES]. 12 Oct 62 [25]p. 21 refs. JPRS: 15684.
Order from OTS or SLA $2.60 62-33435

Trans. of Gigiena i Sanitariya (USSR) 1962 [v. 27] no. 5, p. 17-21, 54-55, 68-72, 97-101.

DESCRIPTORS: Public health, Industrial medicine, *Heat tolerance, Resistance, Animals, *Medical personnel, Training, *Radiobiology, *Radioactivity, Air, Contamination, Safety, *Minerals, Mining engineering, *Radioactive fall-out, Particles, *Metabolism, Climate.

Contents:
The problem of increasing an organism's heat resistance, by E. I. Kuznets
Teaching radiation hygiene in medical educational institutions, by A. F. Stoyanovskii
The problem of radiation safety in prospecting for minerals, by P. I. Moiseitsev
Data on the relationship between density of radioactive fallout and the dust content of the atmosphere, by Z. V. Dubrovina
Basal metabolism in the extreme north, by N. P. Dobronravova.

Bakulev, A. [N.].
THE SPACE AGE. 5 June 62 [7]p. FTD-TT-62-599.
Order from OTS or SLA $1.10 62-32582

Unedited rough draft trans. of [Russian] newspaper article from an unidentified source, n. d.

DESCRIPTORS: *Space flight, *Space biology, Pressure suits, Viruses.

Jakutis, T.
NATURE, MAN, AND TECHNOLOGY. 9 July 62 [5]p. JPRS: 14408.
Order from OTS or SLA $1.10 62-25719

Trans. from Czerwony Sztandar (Litovskoi SSR) 1962, no. 85, 11 Apr, p. 3.

DESCRIPTORS: *Man, *Cybernetics, *Brain, Computers, Biology, Engineering, *Automation.

The potentialities of even the most perfect machines are always limited. On the other hand, the development of the human mind is unlimited. By creating thinking machines man will enter a higher stage of his development. Cybernetic machines will serve man in solving important problems in subduing nature and in changing into reality the greatest dream of humanity-the building of communism. (Extract)

Kiparisova, L. D., Markovskii, B. P., and Radchenko G. P.
NEW FAMILIES AND GENERA OF INVERTEBRATES. [1962] 14p.
Order from ATS $25.50 ATS-49P61R

Trans. of Vses[oyuznyi] Geol[ogiya] Inst[itut]. Materialy (USSR) 1956, no. 12, p. 9-21.

DESCRIPTORS: Biology, *Animals,

Kriger, Yu. A. and Kudryashov, Yu. B.
ELECTROKINETIC PHENOMENA IN BIOLOGY (LECTURES FOR A BIOPHYSICS COURSE). 27 Mar 62 [31]p. 9 refs. JPRS: 13189.
Original copy poor quality; available on loan from OTS or SLA 62-23769

Trans. of mono. (booklet) Elektrokinoticheskie Yavloniya v Biologii, Moscow, 1960, 36p.

DESCRIPTORS: Instruction manuals, *Biophysics, *Electrophoreisis, *Biology, Bacteria, Cells (Biology), Electric potential, Bioelectronics.

This booklet is a version of the course of lectures given to students in the Department of Biophysics of the Soil Biology Faculty of Moscow State University and can be used as a manual of instruction and methods. (Author)

Mal'dzhyunaite, S. and others.
NEWS OF LITHUANIAN SCIENCE. 21 June 62 [19]p. JPRS: 14241.
Order from OTS or SLA $1.60 62-25478

Trans. of Akademiya Nauk Litovskoi SSR [Vilna]. Trudy. Seriya C, 1961, no. 1(24) p. 239-249.

DESCRIPTORS: Scientific research, *Plants, Animals, *Parisitology, *Medicine, *Microbiology, Worms.

Oparin, A. [I.] and Fesenkov, V.
LIFE IN THE UNIVERSE, tr. by D. Myshne. 1961, 1v.
Order from Twayne Publishers Inc., New York $4.50

Trans. of unidentified Russian mono., n.p., n.d.

DESCRIPTORS: *Animals, *Plants, *Planets, Galaxies.

Palazzuoli, Michelangiolo and Aldo, Zalla.
ON THE PROBABLE CORRELATION OF THE SMOKING HABIT WITH SOME DEPRESSIVE STATES. [1962] 10p.
Order from K-H $12.50 K-H 12159-c

Trans. of Rassegna di Studi Psichiatrici (Italy) 1962, v. 51, no. 1, p. 117-123.

DESCRIPTORS: *Tobacco, Smokes, Cigarettes, *Behavior, Personality.

Vincent, D. and Segonzac, G.
THE ANTIBIOTIC ACTION OF TOBACCO SMOKE. [1962] 12p.
Order from K-H $15.00 K-H 6471

Trans. of Toulouse-Médical (France) 1957, v. 58, no. 1, p. 1-9.

DESCRIPTORS: Cigarettes, Smokes, *Tobacco, *Antibiotics

NEWS OF THE ACADEMY OF SCIENCES USSR, BIOLOGY SERIES, 1962 [VOL. 27] NO. 4: SELECTED ARTICLES. 26 Oct 62, 78p. 93 refs. JPRS: 15893.
Order from OTS $2.00 62-11794

Trans. of Akademiya Nauk SSSR. Izvestiya. Seriya Biologicheskaya, 1962 [v. 27] no. 4, p. 477-501, 592-602, 621-626, 636-643.

DESCRIPTORS: *Biology, *Nucleic acids, *Proteins, Synthesis, Bacteria, Immunology, Genetics, Conditioned reflex, Reflexes, *Cerebral cortex, Electroencephalography, Space flight, Gravity, Physiology, Rabbits, Laboratory animals, Conferences, *Cancer research, *Space medicine.

Contents:
Informational RNA and regulatory mechanism of protein synthesis in bacteria (a review) by A. S. Spirin and V. N. Smirnov
Experience in the physiological analysis of the process of immunogenesis in connection with its conditioned-reflex regulation, by V. I. Luk'yanenko
Study of changes in the electrical activity of the cerebral cortex during the action of prolonged transverse G-effects, by G. V. Izosimov and A. N. Razumeev
Joint session of the Department of Biological Sciences USSR and the Department of Medico-Biological Sciences of the Academy of Medical Sciences USSR on problems of the biological basis of malignant growth, by V. M. Mityushin
Session of the Department of Biological Sciences of the Academy of Sciences USSR on some results and problems of space biology, by A. A. Markovich.

PHILOSOPHICAL PROBLEMS OF MEDICINE: TABLE OF CONTENTS AND [SELECTED ARTICLES]. 8 Oct 62 [30]p. 60 refs. JPRS: 15593.
Order from OTS or SLA $2.60 62-33280

Trans. of Russian mono. Filosofskie Voprosy Meditsiny, n.p., n.d., p. 101-115, 190-202, 303.

DESCRIPTORS: *Philosophy, *Biology, Morphology, *Physiology, *Neurology, *Brain, Reflexes, Conditioned reflex.

Contents:
The interrelationship between form and function, by V. V. Kupriyanov
The role of the reticular formation of the brain stem in the physiologic mechanisms of consciousness, by L. O. Badalyan
Contents.

Franz, K.
STUDIES ON THE PHYSIOLOGY OF THE UTERUS. Communication no. 1. [1962] 26p.
Order from K-H $32.50 K-H 5258-a

Trans. of Z[eitschrift für] Geburtshilfe u[nd] Gynaköl-[ogie] (Germany) 1904, v. 53, p. 361-419.

DESCRIPTORS: *Reproductive system, *Uterus, Physiology.

Gurevich, B. K.
LA CIBERNETICA E ALCUNE QUESTIONI DELLA MODERNA FISIOLOGIA DEL SISTEMA NERVOSO (Cybernetics and Some Questions of Modern Physiology of the Nervous System) tr. by G. Crino. 17p. 9 refs. CNP-55. (text in Italian).
Order from OTS or ETC $1.85 62-26127

Trans. of Akademiya Nauk SSSR. Vestnik, 1957 [v. 27] no. 9, p. 31-40.
Another trans. is available in English from OTS or SLA $2.60 as 62-15109, NIH-135 [1961] 23p.

DESCRIPTORS: Cybernetics, *Nervous system.

Kostyuk, P. G.
MICROELECTRODE TECHNIQUE. 5 Nov 62 [135]p. 192 refs. JPRS: 16028.
Order from OTS or SLA $10.50 62-33699

Trans. of mono. Mikroelektrodnaya Tekhnika, Kiev, 1960, 126p.

DESCRIPTORS: *Electrodes, Construction, Stimulation, Polarization, Injection, Hydrogen ion concentration, Determination, Electric potential, Cells(Biology), Amplifiers, *Nervous system, Brain, Physiology, Bibliography

The present monograph represents the first systematic treatment of the use of microelectrodes in the study of basic physiological processes. It consists of two main sections: (1) the use of extracellular microelectrodes and (2) the use of intracellular microelectrodes. Each section includes a detailed description of methods of microelectrode construction, the amplification systems which can be employed in work with such microelectrodes, and methods of analyzing results. There is also a survey of literature on the use of microelectrodes in physiological experiments, including a detailed survey of the latest technical achievements of foreign neurophysiologists. The use of microelectrodes for purposes other than biopotential tapping is also treated in detail (techniques of using microelectrodes as microinjectors for introducing various substances into cells, the polarization of individual cells through intracellular microelectrodes, etc.). (Author)

Parin, V. V., Yazdovskii, V. I., and Gazenko, O. G.
DEVICES TO PROTECT THE ORGANISM FROM G-FORCES AND IN THE WEIGHTLESS STATE. 21 Mar 62 [4]p. FTD-TT-62-431.
Order from OTS or SLA $1.10 62-24337

Unedited rough draft trans. from Meditsinskii Rabotnik (USSR) 1962 [v. 25] 6 Feb, p. 3.

DESCRIPTORS: *Space flight, *Space medicine, *Weightlessness, *Gravity, Acceleration, Physiology, Stress (Physiology).

Rivenzon, A. S.
EXPERIMENTAL DATA ON THE STUDY OF THE PROCESS OF SPERMATOGENESIS AND CELLULAR NEOGENESIS. Pt. 1 of Contributions to the Study of Spermatogenesis. [1962] 23p.
Order from ATS $29.50 ATS-86P62RU

Trans. of Acad[emia] Rep[ublicii] Populare Romine. Buletin Stiint[ific]. Sect[ia de] Stiinte Med[icale] (Rumania) 1954, v. 6, no. 4, p. 1043-1083.

DESCRIPTORS: *Spermatogenesis, Cells (Biology), Reproduction.

Scheuble, Ernst and Müller, E. A.
INFLUENCE OF FOOD SUPPLEMENTS AND FOOD INTAKE ON THE PULSE RATE DURING WORK. [1962] 15p.
Order from K-H $18.75 K-H 3178-e

Trans. of Arbeitsphysiologie (Germany) 1952, v. 14, p. 469-476.

DESCRIPTORS: *Food, *Blood circulation, *Exercise, Nutrition.

Thiebault.
EXPERIMENTS ABOUT THE FATIGUE OF SPORTSMEN AND ITS THERAPY: WORK DONE AT THE BATALLION OF JOINVILLE. [1962] 17p. (7 figs. omitted).
Order from SLA $1.60 62-14586

Trans. of Soc[iété de Médecine] Militaire Franç[aise]. Bull[etin] Mens[uel] [1958] v. 52, p. 139-149.

DESCRIPTORS: *Fatigue (Phsyiology), *Recreation, Reaction (Psychology), *Physical fitness.

Biochemistry

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNAL (BIOLOGICAL CHEMISTRY SERIES) 1961, NOS. 8-11. 5 Sep 62 [7]p. JPRS: 15132.
Order from OTS or SLA $1.10 62-32708

Trans. of selected abstracts from Referativnyi Zhurnal. Khimiya. Biologicheskaya Khimiya (USSR) 1961, nos. 8 and 11.

DESCRIPTORS: *Abstracts, *Bibliography, Biochemistry, China, *Pharmacology, *Antitoxins, *Metabolism, Vitamins, Hormones.

Eberwein, H., Gries [F. A.] and Decker [Karl].
DECOMPOSITION OF NICOTINE BY BACTERIA ENZYMES. II. ISOLATION AND CHARACTERIZATION OF A NICOTINE-DECOMPOSING SOIL BACTERIA. [1962] 17p.
Order from K-H $21.25 K-H 11687

Trans. of Hoppe-Seyler's Z[eitschrift] für Physiol-[ogische] Chem[ie] (West Germany) 1961, v. 323, p. 236-248.

DESCRIPTORS: *Nicotine, Decomposition, *Bacteria, *Enzymes.

Giovannozzi Sermanni, G.
DECOMPOSITION OF NICOTINE BY ENZYMES. [1962] 4p.
Order from K-H $5.00 K-H 5875

Trans. of [1a] Ricerca Sci[entifica] (Italy) 1956, v. 26, no. 6, p. 1883-1885.

DESCRIPTORS: *Nicotine, *Decomposition, *Enzymes.

Gurov, V. A.
HANDBOOK ON ENDOCRINE, ENZYME, AND SPECIAL RAW MATERIALS AND THE PRODUCTION OF ORGANIC PREPARATIONS: TABLE OF CONTENTS. 18 Sep 62 [9]p. JPRS: 15323.
Order from OTS or SLA $1.10 62-33053

Trans. of mono. Spravochnik po Endokrinnomu, Fermentnomu, Spetsial'nomu Syr'yu i Proizvodstru Organopreparatov, Moscow, 1961, p. 305-308.

DESCRIPTORS: Textbooks, *Endocrine glands, Secretions, Enzymes, Biochemistry.

Mitsui, Tetsuo.
PHYTOSTEROL FROM SUGAR-CANE WAX. Rept. no. 1 on The Study of Sugar-Cane Wax. [1962] [17]p. 37 refs.
Order from SLA $1.60 62-16045

Trans. of [Nihon Nogei-Kagakkai Shi] (Japan) 1937, v. 13, p. 494-501.

DESCRIPTORS: *Sterols, Plants, Grasses, *Waxes.

Paris, G.
STUDIES AND RESEARCHES IN THE BIOCHEMISTRY OF TOBACCO. [1962] 21p.
Order from K-H $26.25 K-H 5484-b

Trans. of Stazioni Sperimentali Agrarie Italiane, 1920, v. 53, p. 81-96.

DESCRIPTORS: *Biochemistry, *Tobacco.

Botany

FORESTS AND FLORA OF CUBA. 5 Oct 62 [58]p. JPRS: 15583.
Order from OTS or SLA $5.60 62-33277

Trans. of Revista Geografica (Cuba) 1960, v. 30, no. 1, p. 5-18 and no. 2, p. 33-48.

DESCRIPTORS: *Forestry, Economics, Wood, Soils, Rocks, *Geography, *Plants, *Trees, Distribution, *Cuba.

Contents:
The forest economy of Cuba, by Louis Hugnet
Vegetation of the Vinales Valley, by Brother Alain, F.S.C

Freudenberg, Karl.
MODERN METHODS OF PLANT ANALYSIS, VOL. 3. [1962] 43p.
Order from K-H $53.75 K-H 5924

Trans. of mono. pub. Berlin/Gottingen/Heidelberg, 1955, p. 499-516.

DESCRIPTORS: *Plants, Analysis.

Hagiya, Kaoru.
PHYSIOLOGICAL STUDIES ON STORED TOBACCO POLLEN. II. ON THE GERMINATING AND FERTILIZING POWER, AND ESPECIALLY THE DIFFERENCE BETWEEN THEM. [1962] 9p.
Order from K-H $11.25 K-H 3140-a

Trans. of Bot[anical] Mag[azine] (Japan) 1949, v. 62, Jan/Feb, p. 9-13.

DESCRIPTORS: Physiology, *Tobacco, Storage, *Pollen, *Fertility, Growth, Reproduction.

Hagiya, Kaoru.
PHYSIOLOGICAL STUDIES ON STORED TOBACCO POLLEN. III. ON SEEDS AND PLANTS IN THE NEXT GENERATION. [1962] 10p.
Order from K-H $12.50 K-H 3140-b

Trans. of Bot[anical] Mag[azine] (Japan) 1949, v. 62 [Jan/Feb] p. 49-52.

DESCRIPTORS: Physiology, *Tobacco, *Pollen, *Seeds, Storage, Plants, Genetics.

(See also: K-H 3140-a)

Kanngiesser, W.
PAPER-ELECTROPHORETIC INVESTIGATION OF PRESSURE-DIALYTIC CONCENTRATED LEAF EXTRACTS OF HEALTHY AND VIRUS-DISEASED TOBACCO PLANTS. [1962] 21p.
Order from K-H $26.25 K-H 8214

Trans. of Zeitschrift für Pflanzenkrankheiten [Pflanzenpathologie] und Pflanzenschutz (West Germany) 1957, v. 64, no. 5, p. 257-271.

DESCRIPTORS: *Electrophoresis, *Tobacco, Plants, *Virus diseases.

Komissarov, D. A.
THE BREEDING OF WOODY PLANTS FOR CUTTAGE CAPACITY AND THE VALUE OF REPEATED PROPAGATION OF PLANTS FROM CUTTINGS. [1962] 5p.
Order from ATS $9.00 ATS-65P62R

Trans. of Agrobiologiya (USSR) 1960, no. 5, p. 766-768.

DESCRIPTORS: *Plants, Reproduction, Growth.

Mizuno, R. and Kimpyo, T.
POLYSACCHARIDES OF THE YELLOW-TOBACCO LEAF (1). Pt. 2 of [A Study of] the Carbohydrates of Tobacco. [1962] 9p.
Order from K-H $11.25 K-H 12138

Trans. of [Nihon Nogei-Kagakkai Shi] (Japan) 1957, v. 31, p. 830-832.

DESCRIPTORS: *Tobacco, Carbohydrates, Saccharides.

Pyriki, Constantin.
THE DISTRIBUTION OF ALKALOIDS VOLATILE WITH STEAM IN THE ORGANS OF NICOTIANA SPECIES IN TOPPED AND UNTOPPED PLANTS. [1962] 10p.
Order from K-H $12.50 K-H 5470 c

Trans. of Pharmazeutische Zentralhalle [für Deutschland] (East Germany) 1956, v. 95, Mar, p. 91-96.

DESCRIPTORS: Plants, *Tobacco, *Alkaloids, Distribution, Steam.

Schreiber, K.
THE GLYCO-ALKALOIDS OF THE SOLANACEAE. [1962] 44p.
Order from K-H $55.00 K-H 3471 d

Trans. of Chem[ische] Techn[ik] (East Germany) 1954, v. 6, no. 12, p. 649-658.

DESCRIPTORS: *Plants, Glycols, *Alkaloids.

Yabuta, T. S., Sumiki, Y. and others.
THE EFFECTS OF GIBBERELLIN ON SPECIAL COMPONENTS AND SPECIAL TISSUES OF PLANTS. [1962] 7p.
Order from K-H $8.75 K-H 3561-b

Trans. of [Nihon Nogei-Kagakkai Shi] (Japan) 1941, v. 17, no. 12, p. 1001-1004.

DESCRIPTORS: *Plants, Tissues (Biology), *Growth substances, Hormones.

Yamafuji, Kazuo.
TWO NEW GLUCOSIDES FROM TOBACCO LEAVES, I. [1962] 13p.
Order from K-H $16.25 K-H 5381-c

Trans. of [Nihon Nogei-Kagakkai Shi] (Japan) 1932, v. 8, p. 404-410.

DESCRIPTORS: *Tobacco, *Glucosides, Carbohydrates.

Yoshii, Hajime, Tokuskige, Y., and Nonaka, F.
ACCUMULATION OF RADIOACTIVE PHOSPHORUS-32 OR SULPHUR-35 IN THE LESIONS PRODUCED BY VARIOUS TREATMENTS ON THE LEAVES OF SOME NICOTIANA PLANTS. [1962] 9p.
Order from K-H $11.25 K-H 5709-d

Trans. of [Nihon Shokubutsu Byori Gakkaiho] (Japan) 1955, v. 20, no. 1, p. 16-20.

DESCRIPTORS: *Tobacco, Injuries, Radioactive isotopes, *Phosphorus, *Sulfur.

Medical Specialties and Equipment

INDUSTRIAL HYGIENE. 15 Oct 62 [23]p. 20 refs. JPRS: 15698.
Order from OTS or SLA $2.60 62-33445

Trans. of Gigiena Truda i Professional'nye Zabolevaniya (USSR) 1962 [v. 6] no. 7, p. 19-22, 34-37, 54-58.

DESCRIPTORS: *Vibration, *Diseases, *Bioelectronics, *Muscles, Electromyography, Electroencephalography, *Forging, Metals, *Industrial medicine, Injuries, Countermeasures.

Contents:
The clinical picture of vibration sickness brought about by the action of general vibration, by E. A. Drogichina and N. B. Metlina
Features of the method of recording biocurrents of a worker's muscles and heat during drop forging of metals, by L. A. Vodolazskii and others
Problems of labor hygiene at the All-Union Conference of Hygienists and Sanitation Physicians (no. 14) by I. V. Roshchin
Joint scientific session devoted to problems of industrial safety and prevention of occupational diseases and injuries, by S. N. Kanevskaya and V. S. Filatove.

THE WORK OF THE MEDICAL INDUSTRY MUST BE IMPROVED. 20 June 62 [13]p. JPRS: 14205.
Order from OTS or SLA $1.60 62-25507

Trans. of Meditsinskaya Promyshlennost' SSSR, 1962, [v. 16] no. 1, p. 3-6.
Another trans. is available on loan from OTS or SLA as 62-23766, JPRS-13304, 3 Apr 62 [7]p.

DESCRIPTORS: *Medical equipment, *Drugs, Production, Buildings, Construction, *Instrumentation

For abstract see Technical Translations 8: 433, 1962.

Bykhovskii, M. L.
CYBERNETICS IN MEDICINE: PROBABILITY LOGIC IN SETTING UP AN AUTODIDACTIC DIAGNOSTIC PROCESS IN MATHEMATICAL MACHINES. 26 Apr 62 [23]p. 4 refs. JPRS: 13581.
Order from OTS or SLA $2.60 62-24391

Trans. of Eksperimental'naya Khirurgiya i Anesteziologiya (USSR) 1962 [v. 7] no. 1, p. 3-11.

DESCRIPTORS: *Cybernetics, *Diagnosis, Medicine, Mathematical logic, *Computers, Probability, Programming.

Finogenov, S. N.
THE THERAPEUTIC PROPERTIES OF IONIZED AIR. 30 Oct 62 [72]p. 18 refs. JPRS: 15955.
Order from OTS or SLA $7.60 62-33662

Trans. of mono. Lechebnye Svoistva Ionizirovannogo Vozdukha, Kiev, 1961, 83p.

DESCRIPTORS: *Medical equipment, *Gas ionization, Air, Therapy, Skin, Respiratory diseases, Digestive system, Glands.

Contents:
Natural Ionization of the Air
Artificial Air Ionization
Experimental Substantiation of Aeroion Therapy
Theories of the Mechanism of Action of Ionized Air
Therapeutic Use of Ionized Air
List of Indications for the Use of Ionized Air and Recommended Methods of Therapy
Contraindications to the Use of Ionized Air.

Pathology

AZERBAYDZHAN MEDICAL TRANSLATIONS. 2 Oct 62 [23]p. 14 refs. JPRS: 15538; AD-285 187.
Order from OTS or SLA $2.60 62-33331

Trans. of Azerbaidzhanskii Meditsinskii Zhurnal (USSR) 1962, no. 4, p. 18-22 and 98-105.

DESCRIPTORS: Drugs, Nervous system, Stimulation, Electroencephalography, *Bioelectronics, *Cerebral cortex, *Plastic surgery, Tumors, *Anesthesia, Surgery, Conferences.

Contents:
The problem of the effect of solasodine on the bioelectric potential of the cerebral cortex, by Kh. I. Seifulla
The All-Union Conference of Surgeons, Traumatologists, and Anesthesiologists (no. 2) Baku, 20-25 Dec 61, by Z. M. Mamedov and G. K. Alnev.
(Biological Sciences--Pathology, TT, v. 9, no. 1)

CYBERNETICS AND SURGERY. 16 Oct 62 [28]p. 17 refs. JPRS: 15731.
Order from OTS or SLA $2.60 62-33462

Trans. of Eksperimental'naya Khirurgiya i Anesteziologiya (USSR) 1962 [v. 7] no. 3, p. 3-15 and 58-61.

DESCRIPTORS: *Cybernetics, Surgery, *Medicine, *Computers, Data processing systems, *Diagnosis, *Oxygen, Cerebral cortex, *Heart arrest, *Burns.

Contents:
Automatic information system of detection of a clinical precedent, by I. I. Artobolevskii and others
Changes of oxygen tension in the cerebral cortex and myocardium of the left ventricle during cardiac massage, by V. S. Ryshkin and M. Ya. Khodas
C-reactive protein in burn disease, by P. M. Pashinin and O. S. Krasnopevtseva.

HERALD OF THE ACADEMY OF MEDICAL SCIENCES, 1962 [VOL. 17] NO. 5: SELECTED ARTICLES.
12 Sep 62 [124]p. JPRS: 15239.
Order from OTS or SLA $10.10 62-33014

Trans. of Akademiya Meditsinskikh Nauk SSSR. Vestnik, 1962 [v. 17] no. 5, p. 5-24, 43-47, 58-63, 72-93, 102-115, 118-121, 123-126, 128-130, 142-145.

DESCRIPTORS: Cells (Biology), *Viruses, *Immunization, *Surgery, Adjustment (Psychology), *Physical fitness, Children, Public health, Control, Physiology, Reaction (Psychology), *Stimulation, Morphology, *Infections, Resistance, *Clinical death, Scientific research, *Microbiology, Epidemiology, *Medicine, Biology, Disease, Inhibition.
Contents:
Mechanism of interaction of viruses and cells and immunity to viruses on the cell level, by V. M. Zhdanov
Specific and nonspecific factors in antivirus immunity, by P. N. Kosyakov
The problem of compensation in surgery, by A. A. Vishnevskii and L. L. Shik
The role of physical education of children in prophylaxis of disease, by A. F. Tur
Experience in the analysis of the protective functions of the body on the basis of the concepts of the theory of regulation and of physiology, by B. I. Al'bertinskii and others
General adaptive reactions to the influence of harmful stimuli upon the organism, by I. R. Petrov
Morphologic manifestations of protective functions of the body in infectious processes, by M. V. Voino-Yasenetskii
The biological factors in resistance of vital functions of the organism to processes of extinction, by V. A. Negovskii

The work of the Bureau of the Department of Hygiene, Microbiology and Epidemiology for 1960-61 and problems of scientific research institutions of the department in the light of the resolutions of the Twenty-Second Congress of the CPSU, by G. V. Vygodchikov
The work of the Bureau of the Department of Clinical Medicine for 1960-61 and problems of scientific research institutions of the department in the light of the resolutions of the Twenty-Second Congress of the CPSU, by V. Kh. Vasilenko
The work of the Bureau of the Department of Medico-Biological Sciences in 1960-61 and the problems of scientific research institutions of the department in th light of the resolutions of the Twenty-Second Congress of the CPSU, by N. A. Kraevskii
Resolution of the General Meeting of the Academy of Medical Sciences USSR [held 20 Feb 62] on the Probler "protective functions of the organism".

SOVIET PUBLIC HEALTH, 1962 [VOL. 21] NO. 9: [SELECTED] ARTICLES. 13 Nov 62 [8]p. JPRS: 16148.
Order from OTS or SLA $1.10 63-13095

Trans. of Sovetskoe Zdravookhranenie (USSR) 1962 [v. 21] no. 9, p. 58-59.

DESCRIPTORS: *Public health, Vital statistics, *Fertility, Rural areas, Inhibition, *Infections, *Intestine.

Contents:
Once again on the comparison of mortality and fertility rates in the USSR and in capitalist countries, by A. M. Merkov
Results of the four-year work on the dispensary service for the rural population, by I. G. Zyazin
Experience of work on reduction of morbidity from intestinal infections, by V. D. Goncharova.

Abdullaev, M. M. and Guseinov, O. M.
MODIFIED DRY STERILE THROMBIN OF THE AZERBAIDZHAN INSTITUTE FOR BLOOD TRANSFUSION AND ITS EMPLOYMENT IN E. N. T. CLINICS. 2 May 62 [8]p. 9 refs. JPRS: 13646.
Order from OTS or SLA $1.10 62-24407

Trans. of Azerbaidzhanskii Meditsinskii Zhurnal (USSR) 1962, no. 1, p. 17-20.

DESCRIPTORS: *Thrombin, *Hemorrhage, Inhibition, Surgery, *Otorhinolaryngology, *Blood transfusions.

Ahn, Bertil von.
THE ELEKTROCARDIOGRAM IN TOBACCO SMOKING. III. PATIENTS WITH CARDIOSCLEROSIS. [1962] 20p.
Order from K-H $25.00 K-H 3282

Trans. of Nordisk Medicin (Sweden) 1949, v. 41, p. 451-455.

DESCRIPTORS: *Electrocardiography, *Cigarettes, Smokes, Tobacco, *Arteriosclerosis, *Heart.

Cabrera Millet, R.
ETIOPATHOGENIC ROLE OF TOBACCO SMOKE. [1962] 11p.
Order from K-H $13.75 K-H 8500-b

Trans. of Revista Clinica Española, 1957 [v. 67] no. 4, p. 225-257.

DESCRIPTORS: *Tobacco, Smokes, Cigarettes, *Pathology.

Cellerino, A. and Billia, P.
PULMONARY VOLUMES IN HEALTHY AND BRONCHOPATHIC SMOKERS BEFORE AND AFTER THE USE OF A CHEMICAL FILTER FOR CIGARETTES. [1962] 18p.
Order from K-H $22.50 K-H 12125

Trans. of reprint of Minerva Medica (Italy) 1962, [v. 53, p. 1516-1521].

DESCRIPTORS: *Lungs, Volume, *Respiratory diseases, *Cigarettes, Porous filters, Chemicals.

Engert, Wilhelm.
TOBACCO SMOKING AND BRONCHIAL CARCINOMA. 1962, 18p.
Order from K-H $22.50 K-H 5470-a

Trans. of Deutsches Medizinisches Journal (West Germany) 1956, v. 7, 15 Mar, p. 133-137.

DESCRIPTORS: *Cigarettes, Smokes, Tobacco, *Lungs, *Cancer.

Fischer, Walther.
CANCER OF THE LUNGS. [1962] 60p.
Order from K-H $75.00 K-H 5069-d

Trans. of Zentralblatt für Allgemeine Pathologie und Pathologische Anatomie (East Germany) 1949, v. 85, no. 6, p. 192-212.

DESCRIPTORS: *Respiratory diseases, *Lungs, *Cancer.

Gusman, S. M.
BALLISTOCARDIOGRAPHIC CHANGES IN THE CLINICALLY HEALTHY AFTER PHYSICAL EXERCISE AND SMOKING. [1962] 13p.
Order from K-H $16.25 K-H 2820

Trans. of Ter[apevticheskii] Arkh[iv] (USSR) 1959, v. 31, no. 1, p. 46-52.

DESCRIPTORS: *Ballistocardiography, *Exercise, Cigarettes, *Smokes, Tobacco.

Hasslinger.
IS THE INGESTION OF BROKEN GLASS DELETERIOUS TO HEALTH (Ist der Genuss von Glassplittern Gesundheitsschädlich)? [1962] [4]p. (foreign text included) 2 refs.
Order from SLA $1.10 62-16132

Trans. of Münchener Medizinische Wochenschrift (Germany) 1929, v. 76 [no. 48] p. 2014.

DESCRIPTORS: *Glass, *Digestive system, Injuries.

Hegglin, R. and Keiser, G.
CONCERNING SMOKING AND CORONARY DISEASES, I.[1962] 10p.
Order from K-H $12.50 K-H 3417-b

Trans. of Schweizerische Medizinische Wochenschrift, 1955, v. 85, 15 Jan, p. 53-55.

DESCRIPTORS: *Cigarettes, Smokes, *Tobacco, *Blood circulation, *Heart, Diseases.

Hering, H.
SKIN DAMAGES DURING TOBACCO PROCESSING. [1962] 12p.
Order from K-H $15.00 K-H 3178-c

Trans. from Dermatologische Wochenschrift (East Germany) 1954, v. 129, no. 11.

DESCRIPTORS: Industrial medicine, *Skin, Pathology, *Tobacco, Processing.

Imobersteg, J. and Scoch-Kanter, M.
ABSORPTION OF CARBON MONOXIDE IN SMOKERS AND NONSMOKERS. [1962] 14p.
Order from K-H $17.50 K-H 3180-e

Trans. of Gesundheit und Wohlfahrt (Switzerland) 1951, v. 31, p. 89-99.

DESCRIPTORS: Absorption, *Carbon compounds, *Monoxides, Cigarettes, *Smokes, Tobacco.

Izar, Guido.
TOBACCO AND HEALTH. [1962] 16p.
Order from K-H $20.00 K-H 3306-a

Trans. of Rass[egna] Intern[azionale di] Clin[ica e] Terap[ia] (Italy) 1954, v. 34, p. 443-449.

DESCRIPTORS: Cigarettes, *Tobacco, Smokes, *Public health.

Jekic, Uros, Stojiljkovic, Srboljub and others.
IMPORTANCE OF THE BACTERIAL FLORA OF THE PHARYNX IN CASE OF ACUTE SYMPTOMATIC PSYCHOSES. 24 Jan 62 [9]p. JPRS: 12159.
Order from OTS or SLA $1.10 62-19559

Trans. of Medicinski Glasnik (Yugoslavia) 1961 [v. 15] no. 4, p. 185-188.

DESCRIPTORS: *Bacteria, Throat, *Psychoses, Mental diseases, *Infections.

Kendereski, S.
A CONTRIBUTION TO THE STUDY OF THE ACTIVITY MECHANISM OF PROTEUS ORGANISM IN FOOD POISONING FROM ANIMAL PRODUCTS. 8 Dec 61 [15]p. JPRS: 11489.
Order from OTS or SLA $1.60 62-19593

Trans. of Higijena (Yugoslavia) 1961 [v. 13] no. 1, p. 39-48.

DESCRIPTORS: *Intestinal bacteria, Toxicity, *Food poisoning, Meat, Milk.

Keutzer, A.
STATISTICAL VIEWPOINTS ON THE QUESTION OF MORTALITY FROM LUNG CANCER. [1962] 13p.
Order from K-H $16.25 K-H 6801-a

Trans. of Ärztliche Mitteilungen (West Germany) 1955 [v. 40] no. 14, p. 417-427.

DESCRIPTORS: Vital statistics, *Cancer, *Lungs.

Korhov, S. I.
BIOELECTRIC CURRENTS IN THE GASTRIC STUMP FOLLOWING RESECTION. 27 Aug 62 [11]p. JPRS: 14988.
Order from OTS or SLA $1.60 62-32541

Trans. of Klinicheskaya Khirurgiya (USSR) 1962, no. 6(246) p. 47-52.

DESCRIPTORS: *Bioelectronics, *Electric currents, *Amputation stumps, *Stomach, Diseases, Diagnosis, Cancer.

Korteweg, R.
FAMILY DOCTOR, SMOKING AND PREVENTION OF LUNG CANCER. [1962] 58p.
Order from K-H $71.25 K-H 9149-a

Trans. of Versl[agen] en Med[edelingen] Betr[effende de] Volksgezondheid (Netherlands) 1958, v. 8, no. 9, p. 807-858.

DESCRIPTORS: *Medical personnel, *Cigarettes, Smokes, Tobacco, Lungs, *Cancer, Inhibition.

Kreyberg, Leiv.
THE RELATION BETWEEN LUNG CANCER AND SMOKING IN NORWAY. No. 6 of Lung Cancer Studies. [1962] 22p.
Order from K-H $27.50 K-H 5073

Trans. of Norsk Laegeforening Tidsskrift (Norway) 1956 [v. 76] no. 3, p. 67-72.

DESCRIPTORS: *Lungs, *Cancer, *Cigarettes, Smokes Tobacco, Norway.

Kroning, Friedrich.
STATISTICAL AND EXPERIMENTAL BASES FOR LUNG CANCER PROBLEM. [1962] 34p.
Order from K-H $42.50 K-H 8345-a

Trans. of die Naturwissenschaften (West Germany) 1958 [v. 45] no. 4, p. 73-80.

DESCRIPTORS: Vital statistics, *Cancer, *Lungs.

Kukowka, A. and Rachow, B.
THE ACIDIFYING AND COLLOIDAL BEHAVIOR OF EMULSIFIED TOBACCO SMOKE OF DIFFERENT ORIGIN: CONTRIBUTION TO THE PROBLEM OF LUNG CANCER DUE TO TOBACCO SMOKE. [1962] 23p.
Order from K-H $28.75 K-H 9874-c

Trans. of D[eu]tsch[e] Gesundh[eits]wes[en] (East Germany) 1959, v. 14, no. 42, p. 1944-1951.

DESCRIPTORS: *Lungs, *Cancer, *Tobacco, Smokes, Acids, Colloids, Cigarettes.

Lauda, E.
NICOTINE DAMAGE. [1962] 25p.
Order from K-H $15.63 K-H 11363-c

Trans. of Medizinische Klinik (West Germany) 1961, v. 56, no. 15, p. 679-685.

DESCRIPTORS: *Nicotine, Toxicity.

Letunov, S. P., Bagdasarov, A. A. and others.
CLINICAL ASPECTS OF SPORT MEDICINE IN THE USSR [AND] THE USE OF POLYGLUCIN IN THE TREATMENT OF PATIENTS WITH EDEMA. 10 Apr 62 [21]p. 8 refs. JPRS: 13402.
Order from OTS or SLA $2.60 62-24018

Trans. of Klinicheskaya Meditsina (USSR) 1962, v. 40, no. 1, p. 5-14 and 91-93.

DESCRIPTORS: *Physical fitness, *Medicine, *Dextran, Therapy, *Edema, Nephritis, Hepatitis, Plasma transfusions, Blood proteins, Plasma substitutes.

Lüdecke, Eberhard.
IS THE INGESTION OF GLASS SLIVERS DELETERIOUS TO HEALTH? [1962] 2p. 2 refs.
Order from SLA $1.10 62-16159

Trans. of Münchener Medizinische Wochenschrift (Germany) 1930, v. 77, 21 Mar, p. 496.

DESCRIPTORS: *Glass, Digestive systems, Injuries.

Lupu, N. Gh., Velican, C. and others.
ABOUT THE ROLE OF HISTAMINE IN THE PATHOGENICITY OF TABAGIC PULMONARY SCLEROSIS. Note 3 of Histamic Pulmonary Sclerosis. [1962] 13p.
Order from K-H $17.25 K-H 9331-c

Trans. of Probleme de Terapeutica (Rumania) 1958, v. 9, no. 2, p. 17-27.

DESCRIPTORS: *Histamines, *Tobacco, Smokes, Pathology, *Lungs.

Miida, Deido.
STUDY ON THE INFLUENCE OF SMOKING UPON BLOOD CIRCULATION. [1962] 17p.
Order from K-H $21.25 K-H 3490

Trans. of Igaku Kenkyu (Japan) 1954, v. 24, no. 8, p. 1539-1549.

DESCRIPTORS: *Cigarettes, Tobacco, Smokes, *Blood circulation.

Navarrete y Sierra, A.
TOBACCO AND CANCER. [1962] 6p.
Order from K-H $7.50 K-H 6574 b

Trans. from la Liga Contra el Cancer. Boletin (Cuba) 1957 [v. 32] no. 1.

DESCRIPTORS: *Tobacco, Cigarettes, Smokes, *Cancer.

Navarrete y Sierra, A.
TOBACCO AND CANCER. [1962] 2p.
Order from K-H $2.50 K-H 6821 c

Trans. from la Liga Contra el Cancer. Boletin (Cuba) 1957, v. 32, no. 3.

DESCRIPTORS: Cigarettes, Smokes, *Tobacco, *Cancer.

Olsuf'ev, N. G. and others.
COMBINATION OF TULAREMIA CONTROL MEASURES IN ZONE OF CONSTRUCTION OF STALINGRAD HYDROELECTRIC STATION AND DISTRICTS (RAYONS) ADJACENT TO IT (Prilozhenie: Kompleks Protivotulyaremiinykh Meropriyatii v Zone Stroitel'stva Stalingradskogo Hidrouzla i Prilegaiushchikh k Nemu Raionov). 1960 [5]p. RSTP T-23-60.
Order from OTS $0.50 62-11143

Trans. of mono. Voprosy Epidemiologii i Profilatiki Tulyaremii (Problems of Epidemiology and Prophylaxis o Tularemia) Moscow, 1958, suppl., p. 184-185.

DESCRIPTORS: *Tularemia, Epidemiology, Therapy.

Proosdij, C. van.
TOBACCO USE AND MEDICINE, II. [1962] 15p.
Order from K-H $18.75 K-H 9002c

Trans. of Nederlands Tijdschrift voor Geneeskunde, 1958, v. 102, 20 Sep, p. 1858-1863.

DESCRIPTORS: *Tobacco, Smokes, *Cigarettes, *Medicine.

Randig, K.
THE ETIOLOGY OF PULMONARY CANCER. [1962] 31p.
Order from K-H $38.75 K-H 3991

Trans. of D[eu]tsch[e] Med[izinische] W[ochen]schr[ift] (West Germany) 1955, v. 80, no. 18, p. 718-724.

DESCRIPTORS: *Cancer, *Lungs, Etiology.

Raubitschek, Hugo Viktor.
CANCER OF THE LUNG AND CIGARET SMOKING. [1962] 11p.
Order from K-H $13.75 K-H 3546 d

Trans. of Wiener Klinische Wochenschrift (Austria) 1955, v. 67, 7 Jan, p. 15-17.

DESCRIPTORS: *Cigarettes, *Tobacco, Smokes, *Cancer.

Renk, F.
THE EFFECT OF SMOKING ON CIRCULATORY FUNCTION. [1962] 8p.
Order from K-H $10.00 K-H 3561 a

Trans. of Deut[sche] Med[izinische] W[ochen]schrift (West Germany) 1943, v. 69, p. 245-246.

DESCRIPTORS: *Tobacco, *Smokes, *Cigarettes, *Circulatory system.

Reubi, F., Milliez, P. and others.
THE THERAPY OF HYPERTENSION (Die Therapie der Hypertonie). A panel discussion. [1962] 15p.
Order from SLA $1.60 62-16037

Trans. of Helv[etical] Med[ica] Acta (Switzerland) 1960, v. 27, Dec, p. 615-629.

DESCRIPTORS: *Drugs, Therapy, *Hypertension, Diagnosis, Surgery, Blood pressure, Autonomic nervous system, *Guanethidine.

Ringertz, N.
THE SIGNIFICANCE OF TOBACCO SMOKING AND OTHER EXTERNAL FACTORS FOR THE OCCURENCE OF LUNG CANCER. [1962] 20p.
Order from K-H $25.00 K-H 3738 a

Trans. of Nordisk Medicin (Sweden) 1955, v. 53, p p. 951-956.

DESCRIPTORS: Cigarettes, *Smokes, *Tabacco, *Cancer, *Lungs.

Rosenberg, A.
AUTOSUGGESTION: THE LINK IN BREAKING AWAY FROM THE USE OF TOBACCO. [1962] 5p.
Order from K-H $6.25 K-H 9462

Trans. of Ugeskr[ift for] Laeger (Denmark) 1959, v. 121, no. 8, p. 299-300.

DESCRIPTORS: *Tobacco, *Smokes, *Cigarettes, *Behavior.

Ruef, Jergen, Bock, K., and Hensel, Herbert.
ON THE EFFECT OF SMOKING ON THE MUSCLE BLOOD STREAM. [1962] 12p.
Order from K-H $15.00 K-H 3769 c

Trans. of Z[eitschrift] f[ür] Kreislaufforschung (West Germany) 1955, v. 44, no. 7/8, p. 272-278.

DESCRIPTORS: Tobacco, Smokes, *Cigarettes, *Blood circulation, *Muscles.

Sabad, L. M.
THE CONTAMINATION OF THE ATMOSPHERE WITH CARCINOGENIC MATERIALS AND THE FIGHT AGAINST THEM. [1962] 15p.
Order from K-H $18.75 K-H 8535-d

Trans. of Casopis Lekaru Ceskych (Czechoslovakia) 1957, v. 96, p. 1618-1624.

DESCRIPTORS: *Atmospheric pollution, *Cancer, Production, Countermeasures.

Safarzynski-Rybka, Irene.
TOBACCO SMOKE AS A CARCINOGENIC FACTOR. [1962] 11p.
Order from K-H $13.75 K-H 6424

Trans. of Polski Tygodnik Lekarski, 1956, v. 11, no. 49, p. 2084-2087.

DESCRIPTORS: *Tobacco, *Smokes, Cigarettes, *Cancer, Toxicity.

Samson, E. I.
LE PARTICOLARITÀ DEL DECORSO DELL'ULCERA NELLE PERSONE DI ETÀ AVANZATA (The Particularity of the Progress of the Ulcer of Middle Aged Person). 13p. 11 refs. CNP-48. (text in Italian).
Order from OTS or ETC $1.85 62-26120

Trans. from Terapevticheskii Arkhiv (USSR) 1961 [v. 33 no. 3.

DESCRIPTORS: *Peptic ulcers, Age factors.

Sanna, M.
EFFECT OF NICOTINE ON OCULAR TONUS AND ANGIOSCOTOMA OF THE GLAUCOMATOUS EYE. [1962] 15p.
Order from K-H $18.75 K-H 3252 a

Trans. of Boll[ettino d']Ocul[istica] (Italy) 1954, v. 33, no. 1, p. 31-39.

DESCRIPTORS: *Nicotine, *Eye, Pressure, Diseases, Blood vessels, *Glaucoma, Toxicity.

Scassellati, Sforzolini and Salucci, G.
FIRST INVESTIGATIONS ON THE PRESENCE OF CARCINOGENIC HYDROCARBONS IN THE SMOKE FROM ITALIAN CIGARETTES. [1962] 5p.
Order from K-H $6.25 K-H 8500-e

Trans. of Società Italiana di Biologia Sperimentale. Bollettino, 1958, v. 34, no. 9, p. 424-426.

DESCRIPTORS: *Cigarettes, Smokes, Tobacco, *Hydrocarbons, *Cancer, Italy.

Scheel.
IS THE INGESTION OF GLASS SLIVERS DELETERIOUS TO HEALTH (Ist der Genuss von Glassplittern Gesundheitsschädlich)? [1962] [3]p. (foreign text included).
Order from SLA $1.10 62-16158

Trans. of Münchener Med[izinische] Wochenschrift (Germany) 1930, v. 77, 18 Apr, p. 682.

DESCRIPTORS: *Glass, *Digestive system, Injuries, Mucus.

Schwartz, Ph.
ANATOMOPATHOLOGICAL RESEARCHES AND STATISTICS. Pt. 1 of Pulmonary Carcinoma and Pulmonary Tuberculosis. [1962] 29p.
Order from K-H $36.25 K-H 9149-c

Trans. of la Presse Médicale (France) 1958, v. 66, no. 59, p. 1337-1340.

DESCRIPTORS: *Lungs, *Cancer, *Tuberculosis, Pathology.

Schwartz, Ph.
LUNG TUBERCULOSIS AND LUNG CARCINOMA. [1962] 42p.
Order from K-H $52.50 K-H 8133 b

Trans. of Wiener Zeitschrift für innere Medizin [und ihre Grenzgebiete] (Austria) 1956, v. 37, p. 306-329.

DESCRIPTORS: *Lungs, *Tuberculosis, *Cancer.

Schwartz, Ph.
OBSERVATION ON THE THEORY ATTRIBUTING THE ORIGIN OF PULMONARY CANCER TO AIR POLLUTION BY CIGARETTE SMOKE. Pt. 2 of Pulmonary Carcinoma and Pulmonary Tuberculosis. [1962] 14p.
Order from K-H $17.50 K-H 8933

Trans. of la Presse Médicale (France) 1958, v. 66, no. 61, p. 1369-1371.

DESCRIPTORS: *Lungs, *Cancer, Air, Contamination, *Cigarettes, *Smokes, Tobacco, *Tuberculosis

(See also K-H 9149-c)

Secretan, J. P.
NICOTINE POISONING AND THE EIGHTH NERVE PAIR. [1962] 7p.
Order from K-H $8.75 K-H 5920 b

Trans. of Confinia Neur[ologica] (Switzerland) 1956, v. 16, no. 4/5, p. 238-242.

DESCRIPTORS: *Nicotine, *Poisoning, Nerves, *Hearing.

Seelkopf, Carl.
THE ISOLATION OF CARCINOGENIC SUBSTANCES FROM CIGARETTE TAR. [1962] 11p.
Order from K-H $13.75 K-H 3614 b

Trans. of Z[eitschrift] für Lebens[mittel] -Unter[suchung] und -Forschung (West Germany) 1955, v. 100, p. 218-222.

DESCRIPTORS: *Cancer, *Cigarettes, Smokes, Tobacco, *Tar.

Serra, Carlo and Lambiase, Mario.
SMOKING AND THE NERVOUS SYSTEM. [1962] 18p.
Order from K-H $22.50 K-H 9054 c

Trans. of Acta Neurol[ogica] (Italy) 1957, v. 12, no. 4, p. 475-493.

DESCRIPTORS: *Tobacco, *Smokes, Cigarettes, *Nervous system.

Sola, J. Espejo.
CARDIOLOGY SINO-AURICULAR BLOCKING. [1962] 10p.
Order from K-H $12.50 K-H 6960

Trans. of Semana Médica (Argentina) 1936 [v. 43, no. 52] p. 1883-1887.

DESCRIPTORS: Heart, *Stimulation, *Vagus nerve

Steinhart, Hiltrud.
HISTORICAL NOTES ON SMOKING. [1962] 6p.
Order from K-H $7.50 K-H 11095 j

Trans. of Med[izinische] Klin[ik] (West Germany) 1961, v. 56, no. 1, p. 26-27.

DESCRIPTORS: History, *Smokes, *Tobacco, *Cigarettes

Sterky, Goran.
TOBACCO HABITS AND BREAKING OF THE TOBACCO HABIT IN A LUNG HOSPITAL. [1962] 8p.
Order from K-H $10.00 K-H 6404b

Trans. of Svenska Läkartidningen, 1957, v. 54, 3 May, p. 1479-1484.

DESCRIPTORS: *Tobacco, Smokes, *Cigarettes, *Behavior.

Takeuchi, Michio.
THE METABOLIC CHANGE OF NICOTINE IN RABBIT LIVER EXTRACT. [1962] 21p.
Order from K-H $26.25 K-H 5668-b

Trans. of [Nihon Yakurigaku Zasshi] (Japan) 1955, v. 51, no. 1, p. 62-69.
#Another trans. is available from K-H $25.00 as K-H 6311a, 20p.

DESCRIPTORS: *Nicotine, *Metabolism, *Liver, Rabbits.

Timoshenko, L. V.
OUR METHOD OF STIMULATION AND REGULATION OF BIRTH PAINS IN DYSTOCIA (Nash Metod Viklikannya Rodiv i Regulyatsii Rodovoi Diyal'nosti pri ii Slabosti). Feb 60, 20p. (2 figs. omitted) 1 ref.
Order from OTS $0.50 62-11158

Trans. of Pediatriya, Akusherstvo i Ginekologiya (USSR) 1957, no. 2, p. 49-54.

DESCRIPTORS: Stimulation, *Uterus, *Childbirth, *Estrogens, Physiology, Pathology, *Pain.

Tizzano, A.
THE RELATIONSHIP BETWEEN TOBACCO SMOKE AND PULMONARY TUMORS. [1962] 28p.
Order from K-H $35.00 K-H 9915 c

Trans. of Annali della Sanità Pubblica (Italy) 1959, v. 20, no. 4, p. 689-709.

DESCRIPTORS: *Smokes, *Tobacco, Lungs, *Tumors.

Überschlag.
STATISTICAL DATA ON TOBACCOISM IN FRANCE. [1962] 5p.
Order from K-H $6.25 K-H 5525 e

Trans. of Annales Medico-Psychologiques (France) 1956, v. 114, May, p. 830-834.

DESCRIPTORS: Cigarettes, Smokes, *Tobacco, *Poisoning, France.

Venulet, Francis.
CONSEQUENCES OF VITAMIN C DEFICIENCY IN SMOKERS. [1962] 18p.
Order from K-H $22.50 K-H 6518 a

Trans. of Polskie Archiwum Medycyny Wewnetrznej, 1956, v. 26, no. 3, p. 393-402.

DESCRIPTORS: *Cigarettes, Tobacco, Smokes, *Ascorbic acid, *Deficiency diseases.

Venulet, F.
INJURIES TO SMOKERS FROM LOSS OF ASCORBIC ACID. [1962] 12p.
Order from K-H $15.00 K-H 3183 d

Trans. of Med[izinische] Klinik (West Germany) 1954, v. 49, p. 959-962.

DESCRIPTORS: *Smokes, Cigarettes, Tobacco, *Injuries, *Ascorbic acid

Vincent, Di., Segonzac, G., Lagreu, R.
SOME EXPERIMENTS WITH TOBACCO SMOKE. [1962] 11p.
Order from K-H $13.75 K-H 3058-c

Trans. of Toulouse-Médical (France) 1953, v. 54, no. 9, p. 651-662.

DESCRIPTORS: *Smokes, *Tobacco, Cigarettes.

Vorländer, Karl.
REMEDIAL EFFORTS IN EXPERIMENTAL CANCER, I. Preliminary Rept. [1962] 6p.
Order from K-H $7.50 K-H 9249 e

Trans. of Klinische Wochenschrift (Germany) 1925, v. 4, no. 23, p. 1120-1121.

DESCRIPTORS: *Cancer, Therapy.

Waldbott, George L.
SMOKER'S RESPIRATORY SYNDROME, AS A CLINICAL ENTITY. [1962] 10p.
Order from K-H $12.50 K-H 3160 m

Trans. of Med[izinische] M[onats]schr[ift] (West Germany) 1953, v. 7 [no. 10] p. 652-654.

DESCRIPTORS: *Cigarettes, Smokes, Tobacco, Diseases, *Lungs.

Wester, J.
SMOKING AND LUNG CANCER [Roken en Longkanker]. [1962] 21p.
Order from K-H $26.25 K-H 8003 f

Trans. of Nederlands Tijdschrift voor Geneeskunde, 1957 [v. 101, no. 10] p. 459-464.
Another trans. is available from LC or SLA mi$2.40, ph$3.30 as 60-15704 [1960] 13p.

DESCRIPTORS: *Cigarettes, *Smokes, Tobacco, *Cancer, Lungs.

For abstract see Technical Translations 5:171, 1961.

Wieberdink, J.
FIGHTING CANCER BY LIMITATION OF TOBACCO CONSUMPTION. [1962] 14p.
Order from K-H $17.50 K-H 7036 b

Trans. of Nederlands Tijdschrift voor Geneeskunde, 1957, v. 101, 14 Sep, p. 1695-1700.

DESCRIPTORS: *Cancer, Inhibition, *Tobacco, *Cigarettes, Smokes.

Wiese, Otto.
TOBACCO SMOKING IN A LUNG SANATORIUM. [1962] 3p.
Order from K-H $3.75 K-H 3178 g

Trans. of Tuberkulosearzt (West Germany) 1954, v. 8, no. 2, p. 112-113.

DESCRIPTORS: Tobacco, Smokes, *Cigarettes, *Hospitals, Diseases, *Lungs.

Winkelmann, M.
MAY THE TUBERCULOSIS PATIENT SMOKE? [1962] 12p.
Order from K-H $15.00 K-H 3998 d

Trans. of Zeitschr[ift] f[ür] Tuberkulose [und Erkrankungen der Thoraxorgane] (East Germany) 1955, v. 105, no. 5/6, p. 301-306.

DESCRIPTORS: *Smokes, *Tobacco, *Tuberculosis, Pathology, *Nicotine.

Wynder, Ernest L., Navarette, Antonio and others.
TOBACCO AND CANCER. [1962] 20p.
Order from K-H $25.00 K-H 8650 f

Trans. of la Liga Contra el Cancer. Boletin (Cuba) 1957 [v. 32] no. 6, p. 175-187.

DESCRIPTORS: *Tobacco, Smokes, Cigarettes, *Cancer.

Zil'ber, L. A.
CANCER AS A PROBLEM OF MOLECULAR BIOLOGY. 7 Sep 62 [11]p. 10 refs. JPRS: 15178.
Order from OTS or SLA $1.10 62-32885

Trans. of Akademiya Nauk SSSR. Vestnik, 1962 [v. 32] no. 7, p. 38-43.

DESCRIPTORS: *Cancer, Biophysics, Cells (Biology), *Molecular structure, Genetics, *Nucleic acids, *Tumors, Antigens, Antibodies, Viruses.

Pharmacology and Toxicology

STUDIES IN ANTIBIOTICS. 13 Nov 62 [18]p. 15 refs. JPRS: 16162.
Order from OTS or SLA $1.60 63-13070

Trans. of #Antibiotiki (USSR) 1962, v. 7, no. 9, p. 771-776 and 786-789.

DESCRIPTORS: *Antibiotics, Production, Drugs, Purification, *Radiation effects.

Contents;
Certain problems in production and science encountered in the field of antibiotics, by A. G. Natradze
Radiation sterilization of antibiotic preparations, by V. I. Pochapinskii and others.

Fedorov, A. A. and Pigulevskii, G. V.
BIOLOGICALLY ACTIVE SUBSTANCES OF PLANT ORIGIN (Biologicheski Aktivnye Veshchestva Rastitel'nogo Proiskhozhdeniya). 20 July 62, 16p. Trans. A-1353.
Order from OTS or SLA $1.60 62-32089

Trans. of Akademiya Nauk SSSR. Vestnik, 1962, v. 32, no. 1, p. 62-67.

DESCRIPTORS: *Drugs, *Plants, Synthesis, Cholines, Antibiotics, Enzymes, Growth substances, Herbicides, Antibiotics, Pharmacology.

Gotz, Frigyes and Kincses, Jozsef.
OBSERVATIONS ON THE ANTISPASMODIC EFFECTS OF "RIDOL". 2 Jan 62 [6]p. JPRS: 11759.
Order from OTS or SLA $1.10 62-19620

Trans. of Orvosi Hetilap (Hungary) 1961, v. 102, no. 35, p. 1661-1662.

DESCRIPTORS: Drugs, Therapy, *Kidney stones, *Spasms, *Inhibition.

"Ridol," the new Hungarian antispasmodic medicine, brings progress in the alleviation of pain caused by lithiasis. We stress the use of the medicament in tablet form to counter kidney spasms. Positive results are the reduction resp., cessation of side-effects, such as nausea, emesis, too. We have not experienced harmful side-effects in connection with the tablets, while the observed symptoms in 25 percent of the cases can be attributed to individual hypersensitivity. (Author)

Jayle, G. E., Berard, J., and Bonnal, J.
THE FALSE OPTICAL NEURITIS DUE TO ALCOHOL AND NICOTINE POISONING. [1962] 8p.
Order from K-H $10.00 K-H 5131-c

Trans. of Societes d'Ophtalmologie de France. Bulletin, 1955, Sep/Oct, p. 569ff.

DESCRIPTORS: *Optic nerve, Pathology, *Nicotine, *Alcohols, *Poisoning.

Komaromy, Laszlo and Szekely, Otto.
USE OF MUSCLE RELAXANTS AND ARTIFICIAL RESPIRATION IN TREATMENT OF STATUS EPILEPTICUS. 10 Jan 62 [8]p. JPRS: 11881.
Order from OTS or SLA $1.10 62-19601

Partial trans. (some parts summarized) of Ideggyogyaszati Szemle (Hungary) 1961, v. 14, no. 4, p. 124-127.

DESCRIPTORS: Therapy, *Epilepsy, Drugs, *Muscle relaxants, Head, Injuries, Curare, Dosage, Tubocurarines, *Artificial respiration.

Kovesligethy, Maria and Vukmirovits, Gyorgy.
THE "GASTROBAMAT" DRUG. 4 Dec 61 [4]p. JPRS: 11286.
Order from OTS or SLA $1.10 62-19688

Trans. of Orvosi Hetilap (Hungary) 1961, v. 102, no. 32, p. 1517.

DESCRIPTORS: Drugs, *Therapy, *Peptic ulcers, *Tranquilizing drugs, Stomach, Secretions, Inhibition.

Krähenbühl, Ch.
EFFECTS OF FLUOXYMESTERONE AND METHYLTESTOSTERONE GIVEN PERORALLY TO MALE HYPOPHYSECTOMIZED RATS (Effets de la Fluoxymésterone et de la Méthyltestostérone Appliquées par Voie Orale Chez le Rat Mâle Hypophysectomisé). [1962] 12p. 30 refs.
Order from SLA $1.60 62-16121

Trans. of Acta Endocr[inologica] (Denmark) 1961, v. 37 [no. 3] p. 394-404.

DESCRIPTORS: *Androgens, *Testosterone, Pharmacology, *Pituitary gland, Excision, Rats, Spermatogenesis, Muscles, Growth, Methyl radical, *Drugs, Fluorides.

Fluoxymesterone and methyltestosterone, given by oral route, display the following properties in the male hypophysectomised rat: The activity of fluoxymesterone as compared with that of methyltestosterone, shows a ratio of 9:1 in the bulbocavernosus muscle, 5:1 in the seminal vesicle, and 1:1 in the ventral prostate, all these three sites being androgenic receptors; the activity ratio in the levator ani muscle, an anabolic receptor is 16: 1. Whereas methyltestosterone does not exert any significant action on the testicles when given in a dose that is definitely androgenic, fluoxymesterone produces growth of the gonad and multiplication of the cells of the seminiferous tubules when administered in a threshold dose as regards effect on the sexual adnexa. This spermatogenic effect which is of very variable degree, leads in some cases to the formation of mature spermatozoa; it represents a reactivation and not merely a maintenance of this process. (Author)

Malek, P., Kol'ts, Ya. and others.
TETRACYCLINE ANTIBOTICS AND RESTORATION OF BONE TISSUE (Tetratziklinovye Antibotiki i Vosstanovlenie Kostnoi Tkani) tr. by Tatiana Boldyreff. 22 May 62, 9p. (figs. refs. omitted).
Order from OTS or SLA $1.10 62-32769

Trans. of Eksp[erimental'naya] Khir[urgiya i Anesteziologiya] (USSR) 1962 [v. 7] no. 2, p. 86-91.

DESCRIPTORS: *Tetracyclines, *Antibiotics, *Bone, *Regeneration, Tissues (Biology), *Pregnancy, Fluorescence, Drugs.

Melson, F.
PHARMACOLOGICAL STUDIES ON SOME DERIVATIVES OF 1,3-DIOXOLANE, WITH SPECIAL REGARD TO THEIR ACTION ON THE CENTRAL NERVOUS SYSTEM, I. 17 Nov 61 [24]p. JPRS: 11141.
Order from OTS or SLA $2.60 62-24568

Trans. of Acta Biologica et Medica Germanica (West Germany) 1961, v. 6, no. 5, p. 395-405.

DESCRIPTORS: *Nervous system, *Drugs, Toxicity, Pharmacology, Blood pressure, Paralysis, Amines, *Pyrocatechol, *Dioxolanes

When the effects of the dioxolanes (K-substances) were measured in mice by means of the actograph, an inhibition of activity was generally observed. When the most highly effective compounds were compared with glyketal it was found that compound K 161 produced the most prolonged paralyzing action (lateral position of animals) persisting for 271.3 minutes. The K-substances produced a potentiation of certain hypnotics, namely of barbiturates and acid ureides, but not of piperidine derivatives. An anti-convulsant effect was observed only with respect to metrazol and strychnine. There was very little effect upon the action of picrotoxin. In spinal cats there was a partial inhibition of the crossed extensor reflex, indicating that the dioxolanes act upon the interneurons of the spinal cord. Dioxolanes appear to exert an effect upon the metabolism of the catecholamines; this was suggested by comparative experiments on potentiation with marsilid and reserpine. This conclusion is supported by the type of pressor effect observed in the cat. (Author)

Miyashita, Yukio.
THE EFFECT OF THEOPHYLLINE ON THE HYDROPS PRODUCED BY NICOTINE. [1962] 56p.
Order from K-H $70.00 K-H 9061-b

Trans. of Nihon Yakurigaku Zasshi (Japan) 1957, v. 53, p. 1086-1118.

DESCRIPTORS: Drugs, *Diuretics, *Edema, *Nicotine, Tobacco, Cigarettes, *Alkaloids.

Nagy, Tibor A.
THE EFFECTS OF CENTEDRIN ON THE CENTRAL NERVOUS SYSTEM. 19 Dec 61 [7]p. JPRS: 11585.
Order from OTS or SLA $1.10 62-19615

Partial trans. (some parts summarized) of Orvosi Hetilap (Hungary) 1961 [v. 102] no. 26, p. 1227-1228.

DESCRIPTORS: Drugs, Therapy, *Mental diseases, Motor reactions, Stimulation, *Nervous system.

The effect of Centedrin was tested in 64 cases. It yielded good results in 51.5 percent, it proved to be ineffective in 29.6 percent, gave adverse effects in 7.8 percent of the patients. According to our experiences, Centedrin has favorable effects in light depressions in the majority of the cases. It influenced the lack of activity and initiative, and counteracted somnolence in the case of organic nervous tensions. In general, it has relieved minor syndromes resulting from tension in healthy persons and increased the capacity of the patients. It is not habit-forming and does not need any special tapering-off treatment. On the basis of the background literature it may be stated that it substantiates our results obtained with the use of Centedrin. (Author)

Nikolaev, O.
ON THE EFFECT OF NICOTINE PILOCARPINE, AND VERA-TRINE ON THE ISOLATED SUBMAXILLARY SALIVARY GLAND OF THE DOG. [1962] 12p.
Order from K-H $15.00 K-H 5470 b

Trans. of [Naunyn-Schmiedeberg's] Arc[hiv für] Exper[imentelle] Path[ologie] u[nd] Pharm[akologie] (Germany) 1930, v. 154, p. 203-210.

DESCRIPTORS: *Nicotine, *Pilocarpine, Drugs, *Salivary glands, Dogs

Pardera, G.
ENDORHACHIS THERAPY WITH NICOTINIC ACID IN CENESTOPATHISC. [1962] 4p.
Order from K-H $5.00 K-H 6999c

Trans. of Rassegna di Studi Psichiatrici (Italy) 1956, v. 45, no. 5, p. 1094-1096.
Another trans. is available from SLA mi$1.80, ph$1.80 as 61-10705 [1961] 4p.

DESCRIPTORS: *Psychoneuroses, *Nicotinic acid, Therapy

Pepeu, G., Mannaioni, P., and Giotti, A.
THE EFFECT OF RESERPINE ON THE RESPONSE OF THE ATRIA OF THE CAVA TO NICOTINE, HISTAMINE, 5-HYDROXYTRPTAMINE AND TO SYMPATHICOMIMETRIC AMINES. [1962] 8p.
Order from K-H $10.00 K-H 9331-a

Trans. of Soc[ietà] Ital[iana di] Biol[ogia] Sper[imentale]. Boll[ettino] 1958, v. 34, no. 20, p. 1326-1328.

DESCRIPTORS: Drugs, *Reserpine, *Reaction (Psychology), *Veins, *Heart, *Nicotine, *Histamines, Serotonin, Pharmacology, *Amines.

Reckzeh.
CHRONIC TOBACCO POISONING AND LIFE EXPECTANCY. [1962] 14p.
Order from K-H $17.50 K-H 5147 a

Trans. of Med[izinische] Klin[ik] (Germany) 1939, v. 35, p. 1169-1170.

DESCRIPTORS: *Tobacco, *Smokes, Cigarettes, Toxicity, *Poisoning, Vital statistics.

Richard, Abel.
THE STUDY OF STIMULANTS AND ARTIFICIAL PARADISES. [1962] 48p.
Order from K-H $60.00 K-H 3779-i

Trans. of Rev[ue de] Path[ologie] Gén[érale et Comparée] (France) 1955, v. 55, no. 667, p. 527-556.

DESCRIPTORS: *Drugs, Stimulation, Nervous system, *Reaction (Psychology).

Solti, F., Rev, J. and others.
THE EFFECT OF NICOTINE ON VEIN PRESSURE AND VEIN TONUS. [1962] 4p.
Order from K-H $5.00 K-H 11095-i

Trans. of Acta Medica (Hungary) 1960, v. 16, no. 3, p. 233-236.

DESCRIPTORS: *Nicotine, Circulatory system, *Blood vessels, Veins, Blood pressure.

Sroka, K. H.
THE SIGNIFICANCE OF ACROLEIN FROM THE STANDPOINT OF HEALTH. [1962] 6p.
Order from K-H $7.50 K-H 5710 e

Trans. of Seifen-Öle-Fette-Wachse (West Germany) 1952, v. 78, p. 537-538.

DESCRIPTORS: *Acroleins, Public health, *Toxicity.

Staub, M. and Furrer, H.
THE TESTING OF NICOTINE FILTERS. [1962] 6p.
Order from K-H $7.50 K-H 3036 c

Trans. of Mitt[eilungen aus dem] Geb[iete der] Lebensm[itteluntersuchungen und] Hyg[iene] (Switzerland) 1953, v. 44, p. 472-474.

DESCRIPTORS: *Nicotine, *Smokes, Tobacco, Cigarettes, *Particulate filters, Toxicity.

Stern, P. and Boskovic, B.
CONTRIBUTION TO THERAPY FOR DFP I POISONING, PT. II (Prilog Terapiji Trovanja DFP-om I (II. Saopcenje). 11 Sep 61 [9]p. JPRS: 10157.
Order from OTS or SLA $1.10 62-19464

Trans. of Vojnosanitetski Pregled (Yugoslavia) 1960, v. 17, no. 7/8, p. 792-794.

DESCRIPTORS: Therapy, *Poisoning, Poisonous gases, *Fluorides, *Phosphates, Acetylcholines, *Cholinesterase, Inhibition, Drugs, *Neuromuscular transmission, Atropine.

Tohyama, Michi.
NATURE OF THE ACTION OF NICOTINE ON THE PUPILS OF THE RABBIT. [1962] 20p.
Order from K-H $25.00 K-H 9428

Trans. of Nihon Yakurigaku Zasshi (Japan) 1958, v. 54, p. 452-458.

DESCRIPTORS: Pharmacology, *Nicotine, *Eye, *Light adaptation, Rabbits.

Tomberg, V.
NEW METHOD OF MEASURING VERY SMALL AMOUNTS OF CO IN THE AIR, BLOOD AND LUNGS. [1962] 4p.
Order from K-H $5.00 K-H 6234 b

Trans. of Experientia (Switzerland) 1954, v. 10, p. 388-389.

DESCRIPTORS: Measurement, *Carbon compounds, *Monoxides, *Air, *Blood, *Lungs.

Wenger, R., Wick, E., and Kuhn, H.
INVESTIGATIONS ON THE BLOOD SUPPLY OF THE EXTREMITIES AFTER THE SMOKING OF ORDINARY CIGARETTES AND CIGARETTES PRETREATED WITH NICOTINAMIDE. [1962] 17p.
Order from K-H $21.25 K-H 3546-f

Trans. of Z[eitschrift für] Kreislaufforschung (West Germany) 1955, v. 44, no. 1/2, p. 29-36.

DESCRIPTORS: *Cigarettes, *Tobacco, Smokes, *Blood circulation, Arms, Legs, *Nicotinic acids, *Amides.

Werle, E., Schievelbein, H., and Spieth, D.
PHARMACOLOGY OF NICOTINE AND DETOXICATION OF NICOTINE BY THE [ANIMAL] ORGANISM, REPT. I. [1962] 36p.
Order from K-H $43.75 K-H 5525-g

Trans. of Arzneimittel-Forschung (West Germany) 1956, v. 6, no. 5, p. 265-269.

DESCRIPTORS: *Nicotine, Pharmacology, *Toxicity, *Inhibition, Tobacco, Smokes, Cigarettes.

Werle, E., Schievelbein, H., and Spieth, D.
PHARMACOLOGY OF NICOTINE AND DETOXICATION OF NICOTINE BY THE ANIMAL ORGANISM, REPT. II. [1962] 39p.
Order from K-H $48.75 K-H 5525-h

Trans. of Arzneimittel-Forschung (West Germany) 1956. v. 6, p. 322-330.

DESCRIPTORS: *Nicotine, Pharmacology, *Toxicity, *Inhibition, Tobacco, Smokes, Cigarettes.

Yamamoto, Iwao, Takeuchi, M., and Tsujimoto, A.
MICRODETERMINATION OF NICOTINE IN RABBIT URINE BY BrCN REACTION. [1962] 11p.
Order from K-H $13.75 K-H 3178-h

Trans. of [Nihon Yakurigaku Zasshi] (Japan) 1954, v. 50 [no. 1] p. 70-75.

DESCRIPTORS: *Nicotine, Determination, Rabbits, *Urine, Microanalysis, *Chemical indicators, Bromine compounds, Cyanides.

Yamamoto, Iwao and others.
STUDIES ON NICOTINE DETOXICATION IN THE RABBIT. [1962] 4p.
Order from K-H $5.00 K-H 6445-f

Trans. of [Nihon Yakurigaku Zasshi] (Japan) 1955, v. 51, no. 1, p. 60-61.

DESCRIPTORS: *Nicotine, Toxicity, Rabbits.

Radiobiology

BULLETIN OF EXPERIMENTAL BIOLOGY AND MEDICINE, 1962, VOL. 53, NO. 2 [SELECTED]. 21 June 62 [33]p. 42 refs. FTD-TT-62-501; AD-283 882.
Order from OTS or SLA $3.60 62-32934

Unedited rough draft trans. of #Byulleten' Eksperimental'noi Biologii i Meditsiny (USSR) 1962 [v. 54] no. 2, p. 39-42, 79-84, 94-96.

DESCRIPTORS: *Biology, *Medicine, *Microwaves, *Cardiac muscle, Radiation tolerance, *Skin, Rhythm, Radiation effects, *Blood, Sensitivity, Gametes, Mammals, *Radiation sickness, *Mutations.

Contents:
Nonthermal action of microwaves on the rhythm of cardiac contractions in animals. Rept. 2. Investigation of pulsed microwave action, by A. S. Presman and N. A. Levitina
Effect of preliminary radioisotope administration on the peripheral blood composition and the survival of animals subsequently x-irradiated with a lethal dose, by P. I. Lomonos
Sensitivity of skin chromatophores to ionizing radiation, by R. I. Pogosyan
Maturative division of oocytes in mammalian ovaries at different stages of the estrous cycle and in acute radiation sickness, by V. Ya. Karmysheva.

PROBLEMS OF RADIOBIOLOGY, 1960 VOL. 3, tr. by Y. S. Halpern and S. Shoshan. Collection of Papers in Honor of the 60th. Anniversary of M. N. Pobedinskii. 1962, 336p. refs. PL-480 HEW.
Order from OTS $3.50 61-31017

Trans. of Voprosy Radiobiologii (USSR) 1960, v. 3.

DESCRIPTORS: *Radiobiology, Radiation effects, Radiation sickness, *Radiation injuries, *Adrenal glands, Corticosteroids, *Respiratory system, *Circulatory system, Inhibition, Reaction (Psychology), *Drugs, Oxygen, *Intestine, Physiology, *Nervous system, *Blood, Dosage, *Autonomic nervous system, Narcotics, *Nitrophenols, Ganglia, *Water, Tissues (Biology), *Metabolism, Ionization, *Body fluids, X-rays, Spectrographic analysis, *Lipids, Synthesis, Decomposition, *Carbohydrates, *Muscles, Radon, *Regeneration, Enzymes, Glycolysis, *Bones, Bone marrow, Surgery, *Anesthesia, *Thyroid gland, Hemopoiesis, *Amputation stumps, Dentine, *Phagocytosis, Morphology, *Spleen, Age, Tests, *Retina, *Hormones, Pituitary gland, *Infections, Influenza viruses, Antibiotics, Staphylococcus, Lungs, *Pneumonia, *Radioprotective drugs, Colloids, *Thiols, Stress (Physiology).

Contents:

Professor Mikhail Nikolaevich Pobedinskii, by G. A. Gusterin and A. I. Strashinin

The mechanism of trophic disturbances following irradiation, by A. V. Lebedinskii and others

Hormonal activity of the adrenal cortex during acute radiation sickness and the effect on it of desoxycorticosterone acetate (Experimental study) by G. A. Zedgenidze and others

Reactions of the cardiovascular system and respiration of irradiated animals to certain functional loads, by V. F. Cherkasov

Depression of reactions in radiation sickness, by O. A. Bryukhanov

Effect of strophanthin on the heart in irradiated animals, by A. V. Lazovskaya

Reflex mechanisms of changes in oxygen absorption by intestinal tissue following local irradiation with radioactive strontium (Sr^{90}), by Z. I. Shitova and E. I. Komarov

Certain properties of the changes in function of the nervous and blood systems following repeated irradiation with small doses, by I. V. Remizova

Effect of sympathetic autonomic nervous system block on the development and course of acute radiation sickness, by N. V. Traskunova

Phase changes in the reactivity of irradiated animals to the action of narcotics (Change of reactivity in relation to ether), by K. K. Poplavskii

The reaction of irradiated dogs to 2,4-dinitrophenol, by I. V. Bondarenko

Special characteristics of reaction of the irradiated organism to gangliolytic substances, by G. N. Alekseeva

The mechanism of functional disturbances in the gastrointestinal tract in acute and subacute forms of experimental radiation sickness, by L. R. Protas and A. A. Danilin

Certain approaches to the study of early stages of radiation aftereffects, by S. N. Aleksandrov

Tissue respiration and radiosensitivity, by S. E. Manoilov

Early disturbances of water exchange in the gastrointestinal tract in radiation injury, by L. A. Kachur and others

The effect of ionizing radiation on the exchange of water between the blood and extravascular fluids in the organism, by L. A. Kachur and others

Use of spectroscopic methods for study of the state of iron-containing compounds in the animal organism during x-ray irradiation, by S. E. Manoilov and B. A. Orlov

Certain disturbances in metabolism of lipids during total external irradiation, by N. N. Demin

Synthesis and decomposition of carbohydrates in the animal organism subjected to total x-ray irradiation, by R. Ya. Keilina

Change in respiration of skeletal muscles after irradiation of various parts of the nervous system with radon, by Z. I. Shitova

Effect of ionizing radiation on one of the enzymes of glycolysis, phosphohexoisomerase, in certain organs and tissues, following total irradiation of the organism, by L. V. Mytareva

Suppression of regenerative processes in bones of animals under various irradiation conditions, by G. S. Strelin and E. M. Pil'shchik

Changes in bone marrow of rat in radiation sickness complicated by blood loss, by A. D. Pushnitsyna

Repair of intestinal surgical wounds during radiation sickness (Experimental study) by K. I. Gankina and others

Effect of ether narcosis on restoration of hemopoiesis in rats subjected to a combination of injuries, by N. I. Shmeleva

Alterations of certain aspects of thyroid gland activity following total body irradiation, by E. A. Lvalin

Effect of total body irradiation on the proliferative capacity of thyroid tissue in white mice, by E. A. Lvalin

Formation of a surgical stump in the extremities of rabbits following experimental radiation sickness, by A. V. Kantin and P. V. Sipovskii

Morphological characteristics of repair of an amputated bone stump in rabbits during and after radiation sickness, by P. V. Sipovskii, and A. V. Kantin

Morphogenesis of acute experimental radiation sickness, by L. V. Funshtein

Effect of whole body fractional x-ray irradiation on the hard dental tissues in albino rats, by Yu. A. Fedorov

The phagocytic capacity of certain parts of the reticuloendothelial system in white mice after total body x-ray irradiation, by L. V. Funshtein and E. I. Shcherban'

Morphological changes in internal organs following total body irradiation of pregnant animals, by G. K. Ochinskaya and L. V. Funshtein

Comparative data on spleen damage in acute radiation sickness in relation to the age of the animal, by V. V. Kholin

Reaction of the spleen, intestinal mucous membrane and testes of a frog to ionizing radiation during total and local irradiation, by L. A. Kashchenko and others

Repair of radiation damage in the testes of frogs, by L. A. Kashchenko and others

Experimental data on the damaging effect of x-rays on the retina of the eye after local and total irradiation, by B. P. Kalashnikov and Yu. S. Kaminskaya

Effect of certain adrenal and pituitary hormones on the course of autoinfectious processes during radiation sickness, by P. N. Kiselev and V. A. Semina

Effect of long-term continuous action of ionizing radiation on the course of infectious processes, by V. N. Sivertseva

Morphological changes in respiratory tract during experimental influenza induced in immune, previously x-ray irradiated white mice, by A. A. Smorodintsev

Possibility of adapting Bacterium faecalis alcaligenes to the action of ionizing radiation, by K. P. Kashkin

Certain data on the reasons for unsuccessful treatment of radiation sickness with antibiotics, by L. D. Meter

Roentgenological and anatomical characteristics of pulmonary changes in experimental staphylococcal pneumonia in irradiated animals, by R. M. Rabinovich

Use of a synthetic colloid solution of the dextran type in combined therapy of radiation sickness, by I. R. Petrov and others

Effect of gangliolytic substances on the course and outcome of experimental radiation sickness, by A. M. Rusanov and others

Prophylactic and therapeutic effect of narcotic substances in radiation sickness, by K. K. Poplavskii

Comparative evaluation of the protective properties of certain mercaptocompounds, by N. A. Ivanova

Effect of moderate physical strain during x-ray irradiation on the course of acute radiation sickness, by E. I. Shcherban'.

Catsch, A[lexander] and Melchinger, H.
THE EFFECT OF CHELATING AGENTS ON THE BIOLOGICAL RETENTION OF RADIOACTIVE YTTRIUM. Pt. 4 of Investigations of the Therapeutic Possibilities in Poisoning due to Radioactive Fission Products. [1961] 9p. 21 refs.
Order from RIS $20.00 RIS G-265

Trans. of Strahlentherapie (West Germany) 1958, v. 107 p. 437-443.

DESCRIPTORS: *Radiation sickness, Therapy, *Chelate compounds, Radioactive isotopes, *Yttrium, Deposits.

Catsch, A[lexander] and Du Khuong Le.
THE EFFECT OF CHELATING AGENTS ON THE RETENTION OF RADIOACTIVE CERIUM IN THE MAMMALIAN ORGANISM. Pt. 1 of Investigations of the Therapeutic Possibilities in Poisoning due to Radioactive Fission Products. [1961] 17p. 33 refs.
Order from RIS $40.00 RIS G-262

Trans. of Strahlentherapie (West Germany) 1957, v. 104, p. 494-506.

DESCRIPTORS: *Radiation sickness, Therapy, *Chelate compounds, Radioactive isotopes, *Cerium, Mammals, Deposits, Bone, Liver, Kidneys, Excretion.

Catsch, Alexander, Du Khuong Le, and Melchinger, Helga.
THE EFFECT OF DIAMINODIETHYLETHER TETRAACETIC ACID [AND DIETHYLENETRIAMINE PENTAACETIC ACID] ON THE BIOLOGICAL DISTRIBUTION OF RADIO-CERIUM [Untersuchungen über Therapeutische Möglichkeiten bei Vergiftungen mit Radiozktiven Spaltprodukten. II. Die Wirkung von Diaminodiäthylathertetraessigsäure und Diäthylentriaminpentaessigsäure auf die Verteilung von Radiocer]. Pt. 2 of [Investigations of the] Therapeutic Possibilities [in Poisoning due to] Radioactive Fission Products. [1961] 28p. 54 refs.
Order from RIS $75.00 RIS G-263

Trans. of [Strahlentherapie (West Germany) 1958, v. 106, no. 4, p. 606-626].

DESCRIPTORS: *Radiation sickness, Therapy, *Ethyl ethers, *Acetic acids, *Amines, Radioactive isotopes, *Cerium, Distribution, Blood, Liver, Bone, Kidneys. (See also RIS G-262)

Catsch, Alexander and Du Khuong Le.
THE EFFECT OF DIETHYLENETRIAMINE PENTAACETIC ACID ON EXCRETION OF RADIOCERIUM WHEN ADMINISTRATION IS BEGUN LATE. Pt. 3 of [Investigations of the Therapeutic Possibilities in] Poisoning [due to] Radioactive Fission Products. [1961] 14p. 12 refs.
Order from RIS $35.00 RIS G-264

Trans. of Strahlentherapie (West Germany) 1958, v. 107, p. 298-[308].

DESCRIPTORS: *Radiation sickness, Therapy, *Ethyleneamines, *Acetic acids, Radioactive isotopes, *Cerium, Metabolism, Excretion.

Khvostov, N. N.
QUELQUES DÉTAILS AU SUJET DE L'APPAREILLAGE POUR BOÎTES À GANTS [Certain Details on the Outfitting of Glove Boxes] tr. by de Trezvinsky. 10 Feb 62 [7] p. 2 refs. CEA Trans. no. R 1483 (text in French).
Order from OTS or SLA $1.10 62-25085

Trans. in French of Medi[tsinskaya Radiol[ogiya] (USSR) 1961, v. 6, no. 1, p. 68-71.
A trans. in English is available from OTS or SLA $12.00 in 62-13398, JPRS-10884, 7 Nov 61 [168]p.

DESCRIPTORS: *Radioactive isotopes, Handling, *Protective clothing.

Tarusov, B. N., Kudryashov, Yu. B. and others.
THE MECHANISM OF FORMATION OF TISSUE HEMOLYSINS UNDER NORMAL CONDITIONS AND AFTER RADIATION INJURY TO ANIMALS. 11 Apr 62 [17]p. 9 refs. JPRS: 13415.
Order from OTS or SLA $1.60 62-23811

Trans. of mono. Voprosy Biofiziki, Biokhimii i Patologii Eritrotsitov (Problems in the Biophysics Biochemistry, and Pathology of Erthrocytes) Krasnoyarsk, 1960, p. 277-283.

DESCRIPTORS: *Tissues (Biology), *Hemolysins, *Radiation injuries, Animals, Lipids, Proteins, Metabolism inhibitors, Radiobiology.

CHEMISTRY

[TRANSACTIONS (REPORTS) OF THE ACADEMY OF SCIENCES OF THE USSR] 1944, VOL. 45, NO. 2: [TABLE OF CONTENTS AND SELECTED ABSTRACT]. [1962] 2p. 1 ref.
Order from OTS or SLA $1.10 62-10773

Abstract trans. of [Akademiya Nauk SSSR]. Comptes Rendus (Doklady) de l'Academie des Sciences de l'U.R.S.S., 1944, v. 45, no. 2, p. 65-66.

DESCRIPTORS: *Geochemistry, Sea water, *Iodine, *Bromine, Oils, *Lakes.

Contents:
Iodine and bromine in the brine of mineral lakes, in natural brines and in oil waters, by A. I. Dzens-Litovskii.

[TRANSACTIONS (REPORTS) OF THE ACADEMY OF SCIENCES OF THE USSR] 1944, VOL. 45, NO. 9: [TABLE OF CONTENTS AND SELECTED ABSTRACT]. [1962] 2p.
Order from OTS or SLA $1.10 62-10777

Abstract trans. of [Akademiya Nauk SSSR]. Comptes Rendus (Doklady) de l'Academie des Sciences de l'U.R.S.S., 1944, v. 45, no. 9, p. 382-384.

DESCRIPTORS: *Raman spectroscopy, *Sulfur compounds, Thiols, Thiourea.

Contents:
Raman spectra of some sulfur-containing compounds, by R. E. Chernitskaya and Ya. K. Syrkin.

[TRANSACTIONS (REPORTS) OF THE ACADEMY OF SCIENCES OF THE USSR] 1946, VOL. 51, NO. 1: [TABLE OF CONTENTS AND SELECTED ABSTRACTS]. [1962] 3p. 4 refs.
Order from OTS or SLA $1.10 62-10799

Abstract trans. of [Akademiya Nauk SSSR]. Comptes Rendus (Doklady) de l'Academie des Sciences de l'U.R.S.S., 1946, v. 51, no. 1, p. 39-50.

DESCRIPTORS: *Dielectrics, Electrical conductance, *Geochemistry, *Copper, Rock, *Petroleum, *Vanadium, *Bitumens.

Contents:
Surface electrical conductance of dielectrics, by N. N. Semenov and N. M. Chirkov
Distribution of copper in sedimentary rocks of the oil-bearing regions of Azerbaidzhan, by E. S. Itkina
Content of vanadium in solid bitumens and bituminous rocks of the Urals and the near-Volga area, by I. I. Romm.

[TRANSACTIONS (REPORTS) OF THE ACADEMY OF SCIENCES OF THE USSR] 1946, VOL. 51, NO. 3: [TABLE OF CONTENTS AND SELECTED ABSTRACTS]. [1962] 3p. 7 refs.
Order from OTS or SLA $1.10 62-10802

Abstract trans. of [Akademiya Nauk SSSR]. Comptes Rendus (Doklady) de l'Academie des Sciences de l'U.R.S.S., 1946, v. 51, no. 3, p. 195-197 and 207-208.

DESCRIPTORS: *Optical analysis, *Acoustics, Gases, Vapors, *Complex compounds, *Platinum compounds, *Ethylenes.

Contents:
Optic-acoustical analysis of gases and vapors by a zero method, by M. L. Veingerov
Preparation of complex compounds of platinum with ethylene in the cation, by A. D. Gel'man and E. A. Meilakh.

Grinberg, A. A.
TWENTY-FIVE YEARS' PROGRESS OF GENERAL AND INORGANIC CHEMISTRY IN U.S.S.R. [1962] 9p. 86 refs.
Order from OTS or SLA $1.10 62-16806

[Abstract] trans. of Uspekhi Khimii (USSR) 1943, v. 12, no. 3, p. 165-188.

DESCRIPTORS: *Bibliography, *Chemistry, Scientific research.

Analytical Chemistry

NICOTINE CONTAINING SOLID MASSES. [1962] 1p.
Order from K-H $1.25 K-H 5513-e

Trans. of German patent 511,983, issued 3 Nov 30 (suppl. to 510,376).

DESCRIPTORS: *Nicotine, Solids.

RAPID METHOD FOR DETERMINATION OF OXYGEN IN COAL ACTUAL TECHNIQUE USED AT CERCHAR. [1960] [10]p. 1 ref.
Order from OTS or SLA $1.10 60-13247

Trans. of [Société Chimique de France. Bulletin, 1952, no. 5, p. 569-573].

DESCRIPTORS: *Coal, *Oxygen, Determination

Andriska, Viktor and Bruckner, Gyorgi.
COLORIMETRIC DETERMINATION OF PHENARSAZINE CHLORIDE. 4 Dec 61 [11]p. JPRS: 11290.
Order from OTS or SLA $1.60 62-19536

Trans. of Magyar Kemiai Folyoirat (Hungary) 1961, v. 67, no. 6, p. 257-259.

DESCRIPTORS: *Fungicides, *Poisonous gases, Phenyl radicals, Arsenic compounds, *Pyridines, Chlorides, Determination, Colorimetric analysis, *Chlorides.

A very rapid colorimetric method has been developed for the determination of phenarsazine chloride. From phenarsazine dissolved in acetone, a complex compound was prepared by means of normal sulphuric acid, whose stable floating was ensured by an emulser. The light absorption ability of the complex compound was determined by means of a Lange-type spectro-photometer, by a comparison with a calibration curve. The duration of the test is 10 to 15 minutes per sample. The minimum determinable quantity of material is one microgram of phenarsazine chloride. The mean error of the method is plus or minus 2 percent, in the 1-5 gamma region. (Author)

Asmus, E., Hohne, R., and Krastsch, J.
PHOTOMETRIC DETERMINATION OF NICOTINE AND PYRIDINE IN TOBACCO SMOKE. [1962] 8p.
Order from K-H $10.00 K-H 12144

Trans. of Z[eitschrift für] Anal[ytische] Chem[ie] (West Germany) 1962, v. 187, no. 1, p. 33-37.

DESCRIPTORS: *Tobacco, Smokes, *Nicotine, *Pyridines, Spectrographic analysis, Photometers, Determination.

Elias, F.
THE PYROLYTIC DETERMINATION OF FLUORINE IN FLUXES AND ELECTRODE COATINGS. Sep 62.
Order from BISI 3 15s BISI-2943

Trans. of Zvaranie (Czechoslovakia) 1961, v. 10, no. 4, p. 104-106.

DESCRIPTORS: *Fluorine, Determination, Pyrolysis, *Welding fluxes, *Electrodes, Coatings.

Gabel, Yu. O. and Shmukovskaya, L. G.
PENOSAN CONTENT OF TOBACCO. [1962] 10p.
Order from K-H $12.50 K-H 5072-a

Trans. of Ukrainskii Khim[icheskii] Zhur[nal] (USSR) 1930, v. 5, p. 185-192.

DESCRIPTORS: *Tobacco, Chemical analysis.

Gorog, Jeno and Szabo, L.
THEORETICAL DEVELOPMENT OF THE SEPARATION OF A NICOTINE-GASOLINE SYSTEM. [1962] 8p.
Order from K-H $10.00 K-H 5857-a

Trans. of Budapesti Muszaki Egyetem Mezogazdasagi Kemiai Techn[ologiai] Tanszakenek Evkonyve (Hungary) 1952/54, v. 3/[8] p. 92-96.

DESCRIPTORS: Theory, *Separation, *Nicotine, *Gasoline.

Guerin, Henri.
PHOSPHATES AND ARSENATES OF CALCIUM AND SODIUM, tr. by Bertha P. Klenova. [1959] 8p. 14 refs. TVA [no.] 3663.
Order from OTS or SLA $1.10 60-19172

Trans. of Chimie et Industrie (France) 1957, v. 77, no. 6, p. 1288-1291.

DESCRIPTORS: *Phosphates, *Arsenates, Calcium compounds, Sodium compounds, *Apatites, Chlorine, Bromine, Metallic compounds.

Ivanov, R. N. and Kukavadze, G. M.
TWO-FILAMENT SURFACE IONISATION SOURCE FOR A MASS SPECTROMETER, tr. by F. E. Wallwork. Sep 61 [17]p. 5 refs. AWRE/Trans/22; [DSIR] NLL M. 4611.
Order from OTS or SLA $1.60 62-25560

Trans. of Pribory i Tekhnika Eksperimenta (USSR) 1957, no. 1, p. 106-110.

DESCRIPTORS: *Mass spectrometer, *Ion sources, Filaments, *Thermionic emission, Solid state physics.

A description is given of an ion source for a mass spectrometer. The source is intended for the analysis of substances in the solid state and is based on the surface ionisation effect. Unlike the widely adopted thermionic source where neutral atoms as well as positive ions due to surface ionisation are evaporated simultaneously from one emitter, in the setup described below the atoms of the material are evaporated from one filament and ionisation takes place on the other. This separation of the process of evaporation and ionisation makes for greater efficiency. (Author)

Kazanskii, B.
DETERMINATION OF NICOTINE BY TITRATION WITH SILICOTUNGSTI ACID. [1962] 11p.
Order from K-H $13.75 K-H 4069-c

Trans. of [Institut Zashchity Rastenii, Leningrad. Trudy po Zashcite Rastenii] (USSR) 193!, ser. 3, no. 1, p. 147-153.

DESCRIPTORS: Determination, *Nicotine, *Titration, Silicon compounds, Tungstic acid.

Knappwost, A.
FLUORINE-HYDROXYL SUBSTITUTIONS ON HYDROXYL APATITE AS ION EXCHANGE REACTION AND ITS APPLICATION FOR THE MICROFLUORINE ANALYSIS, tr. by Bertha L. Klenova. 30 July 56, 7p. 8 refs. TVA [no.] 3571.
Order from OTS or SLA $1.10 60-23474

Trans. of Angewandte Chemie (West Germany) 1956, v. 68, no. 11, p. 371-373.

DESCRIPTORS: *Fluorine, *Hydroxides, *Apatites, Ion exchange, *Exchange reactions, Substitution reactions, *Microanalysis.

Konopik, N.
ON THE POLAROGRAPHIC DETERMINATION OF TETRAVALENT GERMANIUM. [1962]9p. 7 refs.
Order from SLA $1.10 62-16681

Trans. of Zeit[schrift für] Anal[ytische] Chem[ie] (West Germany) 1962, v. 186 [no. 1] p. 127-132.

DESCRIPTORS: *Germanium, Polarographic analysis, Solutions, Dibasic acids.

Kuffner, Friedrich and Raderl, Norbert.
THE CONSTITUTION OF NICOTELLINE. [1962] 18p.
Order from K-H $22.50 K-H 5562-c

Trans. of Monatshefte für Chemie (Austria) 1956, v. 87, [no. 1] p. 71-91.

DESCRIPTORS: Chemical analysis, *Alkaloids, *Tobacco.

Kuffner, F[riedrich] and Kaiser, E.
ON NICOTELLIN AND THE SYNTHESIS OF A NEW TERPYRIDYL. [1962] 16p.
Order from K-H $20.00 K-H 3977

Trans. of Monatshefte für Chemie (Austria) 1954, v. 85, no. 4, p. 896-905.

DESCRIPTORS: *Alkaloids, *Tobacco, Synthesis, *Pyridines.

Luis, Policarpo.
A NEW METHOD FOR DETERMINING NICOTINE. [1962] 15p.
Order from K-H $18.75 K-H 3677-a

Trans. of Anales de Farmacia y Bioquímica (Argentina) 1941, v. 12, p. 126-141.

DESCRIPTORS: *Nicotine, Tobacco, *Determination.

Matsuda, Akio and Uchida, Hiroshi.
COMPOSITION OF HIGHER BOILING MIXTURE IN OXO-PRODUCT FROM PROPYLENE. Oct 62, 20p.
Order from SA $22.00 SA Code-T1

Trans. of [Tokyo Kogyo Shikensho Hokoku] (Japan) 1962 v. 57, no. 1, p. 50-57.

DESCRIPTORS: *Propenes, Oxidation, Mixtures, Boiling, Distillation, Hydrogenation, Gas chromatography, Infrared spectroscopy, Nuclear resonance, Molecular weight, Ethanols, Methanols, Pentanols, Aldehydes.

Nita, Tadashi.
NEW VOLUMETRIC ANALYSIS OF HYDROXYLAMINE BY USING LOW VALENT VANADIUM AND MOLYBDENUM. II. THE ANALYTICAL METHOD BY USING TRIVALENT MOLYBDENUM. June 60 [11]p. 3 refs. Picatinny Arsenal Trans. 87.
Order from OTS or SLA $1.60 60-17431

Trans. of [Nihon Kagaku Zasshi] (Japan) 1953, v. 74, no. 1, p. 28-31.

DESCRIPTORS: *Amines, *Hydroxides, Volumetric analysis, *Vanadium, *Molybdenum, Chemical reactions.

The solution of hexavalent molybdenum was introduced in the reduction apparatus, and the solution was maintained at 0.5 to 1.ON acidic solution with sulfuric acid. The air was replaced with carbon dioxide, and hexavalent molybdenum was reduced to trivalent molybdenum with zinc amalgam by shaking for five minutes. After removing the amalgam, sulfuric acid was added and hydroxylamine hydrochloride solution was added and mixed well. Then 1cc of 0.1M solution of pentavalent vanadium was added and the sulfuric acid concentration of the mixture was maintained at 1 N. The mixture was heated in a steam bath at 90-100°C for 10-15 minutes. After standing for five minutes, excess, low valent molybdenum was titrated with potassium permanganate, and the concentration of hydroxylamine was calculated. The error of determination was within ±0.3 percent, which is the same as the error obtained by the trivalent titanium method and the di- and trivalent vanadium method. The preparation of the solution of molybdenum is easy, but heating and addition of the vanadium solution are necessary. (Author)

Nöther, P.
QUANTITATIVE STUDIES ON THE FATE OF NICOTINE IN THE ORGANISM AFTER TOBACCO SMOKING. [1962] 10p.
Order from K-H $12.50 K-H 3902 a

Trans. of [Naunyn-Schmiedeberg's] Archiv für Experimentelle Pathologie und Pharma[kologie] (Germany) 1923, v. 98, p. 370-377.

DESCRIPTORS: *Smokes, *Tobacco, *Nicotine, Cigarettes, Quantitative analysis.

Nuccorine, R. and Menna, G.
STUDIES ON THE COMBUSTIBILITY OF TOBACCO, IV. [1962] 36p.
Order from K-H $45.00 K-H 3965-b

Trans. of [Pisa U. Facoltà di Agraria. Annali] (Italy) 1930, v. 6, p. 263-299.

DESCRIPTORS: *Combustion, *Tobacco, Chemical properties.

Öhme, Friedrich.
RAPID DIELECTRIC DETERMINATION OF THE RESIDUAL WATER CONTENT OF INORGANIC FERTILIZER SALTS. [1962] 11p. 5 refs.
Order from SLA $1.60 62-16178

Trans. of Zeitschrift für Analytische Chemie (West Germany) 1959, v. 167 [no. 4] p. 271-277.

DESCRIPTORS: Dielectric properties, *Water, *Fertilizers, Inorganic substances, Determination.

The possibility which has been used often to determine water contents on the base of the measurements of dielectric constants, is described as applied in the shape of a new immersion technique for the determination of the residual water in inorganic fertilizer salts. As the amount of water present (less than 5%) contributes greatly to the value of the dielectric constant, this method is very sensitive. The suitability of the new method is proved by presenting two diagrams for the determination of the residual water in Nitrophoska and in Lime- Ammonium - Saltpeter (nitrate of lime and ammonia). (Author)

Okac, A. and Sommer, L.
AN ANALYTICAL INVESTIGATION OF KOJIC ACID (Analyticky Vyznam Kyseliny Kojove). Apr 56 [15]p. 13 refs. TIL/T4592; [DSIR LLU] M 1657.
Order from OTS or SLA $1.60 60-19914

Trans. of Chem[icke] Listy (Czechoslovakia) 1954, v. 48, no. 6, p. 828-838.

DESCRIPTORS: *Kojic acid, Chemical analysis, Ions, Iron, Uranates, Copper, Salts.

Pribil, R. and Fiala, L.
THE USE OF COMPLEXONES IN CHEMICAL ANALYSIS. XXVIII. SELECTIVE DETERMINATION OF CALCIUM. [1960] [15]p. 16 refs. [DSIR LLU] M1661.
Order from OTS or SLA $1.60 60-19910

Trans. of Chem[icke] Listy (Czechoslovakia) 1952, v. 46, p. 331-337.

DESCRIPTORS: *Acetic acids, Chemical analysis, Calcium, Determination, Precipitation, Volumetric analysis.

Kojic acid (5-hydroxy-2-hydroxymethyl-4-pyrone) in a neutral or slightly acid medium, gives a characteristic reaction with Fe^{3+} UO_2^{2+} and Cu^{2+} which are analytically equivalent. In the case of coloured solutions of ferric and uranyl salts the composition of the complexes obtained was investigated photometrically and their formal dissociation constants were determined. Copper salt was isolated. (Author)

Sauvenier, Gh. and Duyckaerts, G.
STUDY OF THE POLAROGRAPHIC BEHAVIOR OF Ge (IV). 1962 13p. 9 refs.
Order from SLA $1.60 62-16715

Trans. of Analytica Chimica Acta (Netherlands) 1955, v. 13, p. 396-403.

DESCRIPTORS: *Germanium, Polarographic analysis, Potassium compounds, Ammonium compounds, Chlorides, Hydroxides.

We give the results of a systematical study of the reduction of Ge(IV) in a buffer-state KCl medium and in a NH_4Cl-NH_4OH medium, and we show under what conditions the polarographic wave can be used for analysis. (Author)

Scalise, M.
THE COMPLEMENTARY NATURE OF X-RAY FLUORESCENCE METHODS AND OPTICAL EMISSION METHODS IN SPECTROCHEMICAL ANALYSIS [La Natura Complementare dei Metodi a Fluorescenza a Raggi e dei Metodi ad Emissione Ottica nell'-Analisi Spettrochimica]. Feb 62.
Order from BISI 5s BISI-2643

Trans. of [la] Met[allurgia] Ital[iana] 1957 [v. 49] no. 6, p. 483-487.

DESCRIPTORS: *Spectrographic analysis, *Chemical elements, Optical analysis, Optical systems, *X-ray spectrometers, Design.

Schneer, Anna and Hartmann, Hilda.
TITRATION WITH $KMnO_4$ IN AN ALKALINE SOLUTION. Pt. 1 of Volumetric Determination of Zirconium, 28 July 59 [21]p. 44 refs. JPRS: 1812-N.
Order from OTS or SLA $2.60 59-13747

Trans. of Magyar Kemiai Folyoirat (Hungary) 1959, v. 65, no. 1, p. 31-36.

DESCRIPTORS: *Zirconium, Determination, *Volumetric analysis, Potassium compounds, Manganates, Solutions

The volumetric determination was worked out for amygdalic acid and p-bromine amygdalic acid with $KMnO_4$, in an alkaline solution. This method was used to determine zirconium. The separated and filtered zirconium tetraamygdalate precipitate was dissolved in Na_2CO_3 and amygdalic acid bound to zirconium into benzoic acid was oxidized with the aid of $KMnO_4$, in an alkaline solution. By titrating amygdalic acid, it was established, as a practical index, that 1.0 milliliter of 0.1 normal $KMnO_4$ is the equivalent of 0.5136 milligrams of zirconium. With this method, the quantities of 2 to 20 milligrams of zirconium from 50 to 200 milliliters of solution containing large quantities of foreign ions we e determined by a single precipitation process and with a ± 1 percent margin of error. (Author)

Toth, J. and Dangelmajer, K.
DENICOTINIZATION OF TOBACCO SMOKE. [1962] 4p.
Order from K-H $5.00 K-H 3964-1

Trans. of Chemiker Zeitung (Germany) 1916, v. 40, p. 1013.

DESCRIPTORS: *Tobacco, Smokes, *Nicotine, Separation.

Varadi, Peter F. and Sebestyen, Gabor L.
NEW VACUUM-TECHNICAL AND CHEMICAL APPLICATIONS OF THE RADIO FREQUENCY MASS SPECTROMETER. [1962] 19p.
Order from K-H $23.75 K-H 11324

Trans. from Magyar Kemiai Folyoirat (Hungary) 1955, v. 61, no. 6.

DESCRIPTORS: *Vacuum apparatus, Chemical analysis, *Radiofrequency spectrum analyzers, *Mass spectrometers.

Wegner, Erich.
THE EXTRACTION AND PRECIPITATION OF THE HIGHER MOLECULAR NITROGEN COMPOUNDS. Rept. 1 on the Contribution to the Determination of Protein-Nitrogen in Tobacco. [1962] 28p.
Order from K-H $35.00 K-H 3471-c

Trans. of Tabak-Forschung (West Germany) 1954. v. 13, p. 9-12.

DESCRIPTORS: Determination, *Proteins, *Nitrogen compounds, *Tobacco, Precipitation, Molecular structure, Chemical analysis.

Wegner, Erich.
THE PAPER CHROMATOGRAPHIC DETECTION OF 8-HYDROXYQUINOLINE-POTASSIUM HYDROGEN SULFATE IN SMOKING TOBACCO. [1962] 9p.
Order from K-H $11.25 K-H 3799-d

Trans. of Z[eitschrift für] Lebensmittel-Untersuchung und -Forschung (West Germany) 1955, v. 102 [no. 1] p. 34-37.

DESCRIPTORS: Smokes, *Tobacco, Cigarettes, *Paper chromatography, *Quinolines, *Sulfates, Detection (Chemical), Potassium compounds, Hydrogen compounds.

Wegner, Erich.
THE SEPARATION OF THE ALCOHOL-SOLUBLE AND HUMIC ACID-LIKE PRECIPITABLE NITROGEN COMPOUNDS FROM THE PROTEINS BY FRACTIONAL EXTRACTION. Rept. 2 on the [Contribution to the] Determination of Protein-Nitrogen in Tobacco. [1962] 24p.
Order from K-H $30.00 K-H-6518-b

Trans. of Tabak-Forschung (West Germany) 1955, v. 16, p. 25-28.

DESCRIPTORS: Separation, *Nitrogen compounds, *Proteins, Determination, Alcohols, Humic acid, *Fractionation, *Tobacco.

Yoshino, Tosjio and Sugihara, Mizuho.
INFLUENCE OF THE IONIC SIZE UPON THE ELUTION CURVE. Pt. 3 of Separation of Various Alkaloids by Ion Exchange. [1962] 15p.
Order from K-H $18.75 K-H 5613-d

Trans. of [Kagaku to Kogyo, Osaka] (Japan) 1954, v. 28, p. 267-271.

DESCRIPTORS: *Alkaloids, Separation, *Ion exchange.

Inorganic Chemistry

Ruff, O[tto].
COMPOUNDS OF ARSENIC PENTAFLUORIDE AND ANTIMONY PENTAFLUORIDE WITH NITROSYL FLUORIDE. [1962] 12p. 6 refs.
Order from SLA $1.60 62-16482

Trans. of Z[eitschrift für] Anorg[anische] Chem[ie] (Germany) 1908, v. 58, p. 325-337.

DESCRIPTORS: *Arsenic compounds, *Antimony compounds, *Fluorides, *Nitrogen compounds, Oxyfluorides, Preparation, Chemical properties, Chemical reactions, Chemical analysis.

Ruff, O[tto], Menzel, W., and Neumann, W.
NOF AND NO_2F. [1962] 11p. (fig. omitted) 8 refs.
Order from SLA $1.60 62-16481

Trans. of Z[eitschrift für] Anorg [anische] Chem[ie] (Germany) 1932, v. 208, p. 293[-303].

DESCRIPTORS: *Nitrogen compounds, *Oxyfluorides, Production, Purification, Chemical properties, Physical properties, Stereochemistry.

Speranskaya, E. F. and Kozlovskii, M. T.
REDUCTION OF SELENIUM BY CADMIUM AMALGAM [Vosstanovlenie Selena Amal'gamoi Kadmiya]. [1962] [15]p. 20 refs.
Order from OTS or SLA $1.60 62-14347

Trans. of Izv[estiya] V[ysshikh] U[chebnykh] Z[avedenii]. [Khimiya i] Khim[icheskaya] Tekh[nologiya] (USSR) 1959, v. 2, no. 1, p. 3-9.

DESCRIPTORS: *Selenium, Reduction, Electrolysis, *Mercury alloys, *Cadmium, Hydrochloric acid, Sulfuric acid.

Selenium was separated from the acid solutions in the concentration range of the acids (0.001 to 1 M). Mercury selenide was formed. In ammonia solution selenium was not reduced. The final state of selenium (IV) reduction is elementary selenium and not selenide ion. Mercury selenide is formed through the direct reaction of elementary selenium and metallic mercury. It is proposed that the three breaks in the potentiometric curve are not connected with the various products of selenium (IV) reduction, but rather with the inhibiting action of mercury selenide film formed on the mercury droplet. (Author)

Wiberg, Egon and Sturm, Winfried.
THE CHEMISTRY OF BORON THIOL $(BHS)_3$ AND ITS DERIVATIVES. [1962] 38p. (refs. omitted).
Order from SLA $3.60 62-16761

Trans. of Angewandte Chemie (West Germany) 1955, v. 67, no. 17/18, p. 483-492.

DESCRIPTORS: *Boron compounds, *Thiols, Chemical properties, Chemical reactions, Molecular structure.

Organic Chemistry

Birshtein, T. M. and Ptitsyn, O. B.
LA DIPENDENZA DELLA STEREOSPECIFICITÀ DEI POLIMERI DALLE CONDIZIONI DI POLIMERIZZAZIONE (Stereospecifity of Polymers as a Function of the Polymerization Conditions). 14p. 38 refs. CNP-37. (text in Italian).
Order from OTS or ETC $1.85 62-26109

Trans. of Vysokomolekulyarnye Soedineniya (USSR) 1959 [v. 1] no. 6, p. 846-850.
Another trans. is available in English from LC or SLA mi$1.80, ph$1.80 as 61-10359 [1960] 6p.

DESCRIPTORS: *Polymers, *Chemical reactions, *Stereochemistry, Molecular Structure.

Cachia, Marc and Wahl, Henri.
POLYCONDENSATION OF HALOTEREPHTHALIC ACIDS WITH ETHYLENE GLYCOL. [1962] 13p. (figs. tables omitted) 11 refs.
Order from SLA $1.60 62-16262

Trans. of Soc[iété] Chimique de France. Bulletin, 1956, no. 8/9, p. 1234-1238.

DESCRIPTORS: Halogen compounds, *Phthalic acids, Condensation, Polymerization, Molecular weight, *Glycols, *Ethylenes.

The polycondensation of haloterephthalic acids with ethylene glycol leads to polymers endowed with a filament property, the melting point of which is lower, the greater the dissymmetry introduced into the nucleus of the terephthalic acid. Moreover, it appears that the difference in reactivity of ortho- and meta-carboxyls of the halogens influences the reaction which, depending on the case at hand, leads to more or less high polymers. (Author)

Chistyakova, M. V.
POLYMERS OF CARBONYL COMPOUNDS. [1962] 25p.
Order from ATS $34.50 ATS-26P62R

Trans. of #Uspekhi Khimii (USSR) 1962, v. 31, no. 4, p. 452-473.

DESCRIPTORS: *Polymers, *Carbonyl compounds.

Esafov, V. I., Vladimirtsev, I. F. and others.
SYNTHESIS OF HYDROCARBONS WITH CONJUGATED DOUBLE BONDS, [PT.] IV. [1962] 3p. 8 refs.
Order from OTS or SLA $1.10 62-16824

[Abstract] trans. of Zhurnal Obshchei Khimii (USSR) 1943, v. 13, no. 11/12, p. 818-822.

DESCRIPTORS: *Hydrocarbons, *Diene synthesis, *Chemical bonds.

Esafov, V. I.
[SYNTHESIS OF HYDROCARBONS WITH CONJUGATED DOUBLE BONDS]. V. APPLICATION OF THE GRIGNARD REACTION TO α, β-UNSATURATED KETONES [1962] 2p. 4 refs.
Order from OTS or SLA $1.10 62-16823

[Abstract] trans. of Zhurnal Obshchei Khimii (USSR) 1944, v. 14, no. 1/2, p. 84-87.

DESCRIPTORS: *Hydrocarbons, *Diene synthesis, *Chemical bonds, *Ketones, *Grignard reactions.

Gol'mov, V. P. and Kazanskii, B. A.
FORMATION OF ETHYL ESTER OF CYCLOBUTANE-1, 1-DICARBOXYLIC ACID BY THE KIZHNER METHOD. [1962][1] p.
Order from OTS or SLA $1.10 62-16778

[Abstract] trans. of Akademiya Nauk SSSR. Doklady, 1941, v. 33, no. 1, p. 37-40.

DESCRIPTORS: *Carboxylic acids, *Cyclobutanes, Ethyl radical, *Esters, Preparation.

Imanishi, Y., Higashimura, T., and Okamura, S.
ISOBUTENE. Pt. 2 of the Relation Between the Nature of Growing Ion Pairs and the Rate Constant Ratios in Cationic Polymerizations. [1962] 10p.
Order from ATS $15.00 ATS-05P63J

Trans. of Kobunshi Kagaku (Japan) 1961, v. 18, no. 194, p. 333-338.

DESCRIPTORS: *Butenes, Reaction kinetics, *Ions, *Polymerization.

Jiang, S. H. -K.
THE ADDITION PRODUCTS OF SULFUR TRIOXIDE AND SOME PERFLUORO-OLEFINS. Pt. 1 of the Addition Reactions of Sulfur Trioxide to Carbon-Carbon Double Bonds. [1962] 10p.
Order from ATS $17.50 ATS-29P62CH

Trans. of Hua Hsüeh Hsüeh Pao (Chinese People's Republic) 1957, v. 23, p. 330-339.

DESCRIPTORS: Chemical reactions, *Sulfur compounds, *Oxides, *Flourine compounds, *Ethylenes.

Kabanov, V. A. and Zubov, V. P.
NEW ROUTES IN THE SYNTHESIS OF POLYMERS BY POLYMERIZATION METHODS. [1962] 16p.
Order from ATS $25.75 ATS-13P63R

Trans. of Vses[oyuznoe] Khim[icheskoe] Obshchestvo. Zh[urnal] (USSR) 1962, v. 7, no. 2, p. 131-140.

DESCRIPTORS: *Polymers, Synthesis, Polymerization.

Kamiya, Y.
FORMATION OF PROPYLENE OXIDE BY THE OXIDATION OF PROPYLENE IN THE GAS PHASE. [1962] 2p.
Order from ATS $3.00 ATS-33P62J

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64, no. 8, p. 1513-1514.

DESCRIPTORS: *Propenes, Oxides, Oxidation, Gases, Phase studies.

Kodama, Tsuneo, Higashimura, Toshinobu, and Okamura, Seizo.
LOW TEMPERATURE CATIONIC POLYMERIZATION OF ALKYL VINYL ETHERS AND THE PROPERTIES OF POLYMERS OBTAINED. VII. EFFECT OF THE POLYMERIZATION CONDITIONS ON THE PROPERTIES OF POLYVINYL METHYL AND ETHYL ETHERS. Oct 62, 10p. 15 refs.
Order from SA $19.00 SA Code-G81

Trans. of Kobunshi Kagaku (Japan) 1961, v. 18, no. 192, p. 267-272.

DESCRIPTORS: Alkyl radicals, *Vinyl radicals, *Ethyl ethers, *Methyl ethers, Polymerization, Ions, *Stereochemistry, X-ray diffraction analysis, Physical properties.

Kukhtin, V. A. and Orekhova, K. M.
SOME NEW TYPES OF THE ARBUZOV REARRANGEMENT. [1962] 6p.
Order from ATS $8.90 ATS-80P63R

Trans. of mono. Khim[iya] i Primenenie Fosfor-organ[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansl Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 88-93. A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p

DESCRIPTORS: *Phosphonic acids, *Esters, Synthesis.

Lebedeva, A. I.
ELECTROLYTIC HYDROGENATION OF ACETYLENIC ALCOHOLS AND DIACETYLENIC GLYCOLS. [1962]2p. 7 refs.
Order from OTS or SLA $1.10 62-16764

[Abstract] trans. of [Akademiya Nauk SSSR]. Comptes Rendus (Doklady) de l'Academie des Sciences de l'U.R.S.S., 1944, v. 42, no. 2, p. 70-73.

DESCRIPTORS: *Electrochemistry, *Acetylene derivatives, *Alcohols, *Glycols, *Hydrogenation, Electrolysis.

Makarov, S. P., Shpanskii, V. A. and others.
REACTION OF POLYFLUORINATED NITROSOALKANES WITH UNSATURATED COMPOUNDS. [1962] 5p. (table omitted) 12 refs.
Order from OTS or SLA $1.10 62-16287

Trans. of Akademiya Nauk SSSR. Doklady, 1962, v. 142, no. 3, p. 596-599.

DESCRIPTORS: *Nitroso radicals, *Methanes, Fluorination, Organic compounds, Chemical reactions, Chemical bonds.

Moshchinskaya, N. K. and Globus, R. L.
RESEARCH ON DIPHENYLMETHANE AND ITS DERIVATIVES. II. DEPENDENCE OF THE YIELD OF DIHENYLMETHANE UPON THE RATIO OF BENZENE TO FORMALDEHYDE USED. [1962] 2p. 1 ref.
Order from OTS or SLA $1.10 62-16813

[Abstract] trans. of Zhurnal Prikladnoi Khimii (USSR) 1944, v. 17, no. 3, p. 137-143.
A complete trans. is available from LC or SLA mi$2.40, ph$3.30 in 60-13878 [1949] [13]p.

DESCRIPTORS: *Phenyl radicals, *Methanes, Production, *Benzenes, *Formaldehyde.

Nametkin, S. S. and Gabriadze, D. M.
RESEARCH ON ISOMERIZATION. V. SOME CONVERSIONS OF DIMETHYLCYCLOPENTYLCARBINOL. [1962] 4p. 15 refs.
Order from OTS or SLA $1.10 62-16828

[Abstract] trans. of Zhurnal Obshchei Khimii (USSR) 1943, v. 13, no. 7/8, p. 560-568.

DESCRIPTORS: *Stereochemistry, *Molecular isomerism, Ethyl radicals, Pentyl radicals, *Carbinols, Methyl radicals.

Negishi, Michiharu and Sekiguchi, Ichiro.
VAPOR PHASE SYNTHESIS OF POLYVINYL CYANOETHYL ETHER. Rept. 1 of Studies on Polyvinyl Cyanoethyl Ether. [1962] 17p. 18 refs.
Order from SLA $1.60 62-14961

Trans. of Sen-i Gakkaishi (Japan) 1956, v. 12, no. 7, p. 479-486.

DESCRIPTORS: Polymers, *Vinyl radicals, *Cyano radicals, *Ethyl ethers, Synthesis, Vapors, Vinyl alcohols, Acrylonitriles, Catalysis, Reaction kinetics, Alcohols.

The synthesis of polyvinyl cyanoethyl ether by the reaction of polyvinyl alcohol with acrylonitrile vapour, in the presence of NaOH catalyst was studied, including effects of the pretreat-swelling by catalyst (0-5 hrs.), amount of water and catalyst (H_2O/PVA wt. 0.1-2.5 and NaOH/PVA mol 0.01-0.34), time and temperature of the reaction (0.5-18 hrs. and 25-55°C) and atmospheric pressure in the reaction vessel (5-760 mmHg) on the rate of cyanoethylation. At a relatively higher temperature and catalyst concentration, a strikingly abnormal rate of cyanoethylation was observed. This may be due to the accompanying of the inverse reaction of cyanoethylation and the slight degree of hydrolysis of the cyano group. Assuming the reaction velocities of the first order for each reaction of the cyanoethylation, decyanoethylation and hydrolysis and the different velocity constants between the crystalline and amorphous regions of polyvinyl alcohol, a theoretical equation for the rate of cyanoethylation is derived. Giving the value of 60% for the accessibility of polyvinyl alcohol and the appropriate values corresponding to the conditions of the reaction for each reaction velocity constant, this equation shows the comparable trend with the experimental results in the principal points. (Author)

Porai-Koshits, A. E.
DEVELOPMENT OF THE CHEMISTRY OF ORGANIC DYESTUFFS AND INTERMEDIATE COMPOUNDS IN U. S. S. R. DURING THE TWENTY-FIVE YEAR PERIOD OF 1917-42. [1962] 4p. 52 refs.
Order from OTS or SLA $1.10 62-16805

[Abstract] trans. of Uspekhi Khimii (USSR) 1943, v. 12, no. 2, p. 134-164.

DESCRIPTORS: *Dyes, Organic compounds, Synthesis.

Razumov, A. I. and Bankovskaya, N. N.
SOME REACTIONS OF THE INTERMEDIATE PRODUCTS OF THE ARBUZOV REARRANGEMENT. [1962] 6p.
Order from ATS $7.75 ATS-81P63R

Trans. of mono. Khim[iya] i Primenenie Fosfor-organ[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 94-98. A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: *Phosphonic acids, *Esters, Synthesis, Chemical reactions.

Rosik, J., Zitko, V., and Vasatko, J.
FRACTIONATION OF PECTINS WITH DEAE-CELLULOSE (DIETHYLAMINOETHYLCELLULOSE). [1962] 7p.
Order from K-H $8.75 K-H 12159-a

Trans. of [Sbornik Chekhoslovatskykh Khimicheskykh Rabot] 1962, v. 27, p. 1346-1350.

DESCRIPTORS: *Pectins, Fractionation, Ethyl radicals, Amines, *Cellulose.

Sadowska, W., Zakrzewski, L., and Fejgin, J.
STABILIZATION OF POLYFORMALDEHYDE, PT. 1. [1962] 7p.
Order from ATS $9.75 ATS-09P62P

Trans. of Przemysl Chem[iczny] (Poland) 1962, v. [18]41, no. 1, p. 40-43.

DESCRIPTORS: *Stabilization, *Formaldehyde, *Polymers.

Shostakovskii, M. F. and Sidel'kovskaya, F. P.
RESEARCH ON POLYMERIZATION OF VINYL ETHERS: VINYL ISOBUTYL ETHER. [1962] 4p. 8 refs.
Order from OTS or SLA $1.10 62-16830

[Abstract] trans. of Zhurnal Obshchei Khimii (USSR) 1943, v. 13, no. 6, p. 428-435.

DESCRIPTORS: *Vinyl radicals, *Butyl radicals, *Ethers, Polymerization.

Strukov, I.
OBTAINING TRIMETHYLENE CHLOROBROMIDE. [1962] 5p. 5 refs.
Order from SLA $1.10 62-16283

Trans. of unidentified article from the Synthetic Chemistry Division of NIKhFI, n.p., n.d.

DESCRIPTORS: *Methanes, *Chlorides, *Bromides, Production, Solar energy, Allyl radicals.

Large yields of trimethylene chlorobromide were obtained by the absorption of HBr by allyl chloride. There is no large scale simultaneous production of propylene chlorobromide or reversion to allyl chloride it the reaction proceeds in direct sunlight and if the HBr is generated from PBr_3 and water. Smaller quantities of trimethylene dibromide were obtained by the same method from HBr and allyl bromide.

Sugino, Kiichiro.
ELECTRO-ORGANIC CHEMISTRY. [1961] [26]p. (illus. ommitted) 57 refs. AERDL T-1080; RIS E 693.
Order from OTS or SLA $2.60 61-28940

Trans. of Kagaku (Japan) 1957, v. 12, p. 349-358.
Also available from RIS $50.00 as RIS E-693.

DESCRIPTORS: *Electrochemistry, Organic compounds. Cathodes (Electrolytic cell), Reduction, Mercury electrodes, Catalysis, Electrolytes, Anodes (Electrolytic cell), Oxidation, Free radicals, Bibliography.

Swarts, F.
ON HEXAFLUOROETHANE. [1962] [4]p. (figs. tables omitted) 3 refs.
Order from SLA $1.10 62-16479

Trans. of Soc[iété] Chim[ique de] Belgique. Bull[etin] 1933, v. 42 [no. 1] p. 114-118.

DESCRIPTORS: *Fluorine compounds, *Ethanes, Physical properties, Chemical properties.

Takahashi, Torizo and Senda, Shigeo.
SYNTHESIS OF BASIC PHENOL-ALKYL ETHERS, REPT. V. [1962] 5p. 4 refs.
Order from SLA $1.10 62-16293

Trans. of Japanese language article from unidentified source [1958].

DESCRIPTORS: *Ethers, Alkyl radicals, Phenols, *Phenyl ethers, Synthesis, Alcohols, Chlorides.

Basic phenol-alkyl ethers were synthesized for the purpose of substituting ergots. The yield of (β-chloroethyl)-(2-formyl-6-ethyl-phenyl) ether (I) was increased considerably by adding potassium iodide to the reaction system. By condensation of diallylamino with compound I, (β-diallyl amino-ethyl)-(2-formyl-y-allyl-phenyl)-ether was obtained. Amino alcohols were prepared by reducing diethylamino acetones with sodium amalgam or sodium and alcohol. The product was treated in the presence of thionyl chloride to synthesize α-diethylamion isopropyl chloride (II). When compound II was condensed with alkali salts of 3-allyl-salicylaldehyde, (α-methyl-β-diethylamino-ethyl)-2-formyl-6-isopropyl-allyl-phenyl)-ether was obtained.

Utzinger, G. Ed. and Regenass, F. A.
A SPECIFIC REAGENT FOR ALDEHYDES, I. [1962] 6p.
Order from K-H $7.50 K-H 3504 c

Trans. of Helv[etica] Chim[ica] Acta (Switzerland) 1954, v. 37, p. 1901-1903.

DESCRIPTORS: *Reagents, *Aldehydes.

Yamaguchi, Tadashi and Amagasa, Masataka.
A STUDY ON THERMAL DEGRADATION PRODUCTS OF POLYVINYL ALCOHOL. [1962] 14p. 3 refs.
Order from SLA $1.60 62-16002

Trans. of Kobunshi Kagaku (Japan) 1961, v. 18, no. 198, p. 645-652.

DESCRIPTORS: Polymers, *Vinyl alcohols, Pyrolysis, Chemical analysis, Acetaldehydes, Benzaldehydes, Acetophenones, Alcohols, Vinyl radicals.

In order to probe the mechanism of thermal decomposition of PVA, the residue from thermal decomposition of PVA and thermal decomposition products of PVA were investigated. There were some differences in quantity depending on whether the thermal decomposition took place in vacuum, in nitrogen current, or in the presence of air, but as decomposition products we

Trans. of mono. Khim[iya] i Primenenie Fosfor-organ[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansl Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 88-93. A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p

DESCRIPTORS: *Phosphonic acids, *Esters, Synthesis.

Lebedeva, A. I.
ELECTROLYTIC HYDROGENATION OF ACETYLENIC ALCOHOLS AND DIACETYLENIC GLYCOLS. [1962]2p. 7 refs.
Order from OTS or SLA $1.10 62-16764

[Abstract] trans. of [Akademiya Nauk SSSR]. Comptes Rendus (Doklady) de l'Academie des Sciences de l'U.R.S.S., 1944, v. 42, no. 2, p. 70-73.

DESCRIPTORS: *Electrochemistry, *Acetylene derivatives, *Alcohols, *Glycols, *Hydrogenation, Electrolysis.

Makarov, S. P., Shpanskii, V. A. and others.
REACTION OF POLYFLUORINATED NITROSO-ALKANES WITH UNSATURATED COMPOUNDS. [1962] 5p. (table omitted) 12 refs.
Order from OTS or SLA $1.10 62-16287

Trans. of Akademiya Nauk SSSR. Doklady, 1962, v. 142, no. 3, p. 596-599.

DESCRIPTORS: *Nitroso radicals, *Methanes, Fluorination, Organic compounds, Chemical reactions, Chemical bonds.

Moshchinskaya, N. K. and Globus, R. L.
RESEARCH ON DIPHENYLMETHANE AND ITS DERIVATIVES. II. DEPENDENCE OF THE YIELD OF DIHENYLMETHANE UPON THE RATIO OF BENZENE TO FORMALDEHYDE USED. [1962] 2p. 1 ref.
Order from OTS or SLA $1.10 62-16813

[Abstract] trans. of Zhurnal Prikladnoi Khimii (USSR) 1944, v. 17, no. 3, p. 137-143.
A complete trans. is available from LC or SLA mi$2.40, ph$3.30 in 60-13878 [1949] [13]p.

DESCRIPTORS: *Phenyl radicals, *Methanes, Production, *Benzenes, *Formaldehyde.

Nametkin, S. S. and Gabriadze, D. M.
RESEARCH ON ISOMERIZATION. V. SOME CONVERSIONS OF DIMETHYLCYCLOPENTYLCARBINOL. [1962] 4p. 15 refs.
Order from OTS or SLA $1.10 62-16828

[Abstract] trans. of Zhurnal Obshchei Khimii (USSR) 1943, v. 13, no. 7/8, p. 560-568.

DESCRIPTORS: *Stereochemistry, *Molecular isomerism, Ethyl radicals, Pentyl radicals, *Carbinols, Methyl radicals.

Negishi, Michiharu and Sekiguchi, Ichiro.
VAPOR PHASE SYNTHESIS OF POLYVINYL CYANOETHYL ETHER. Rept. 1 of Studies on Polyvinyl Cyanoethyl Ether. [1962] 17p. 18 refs.
Order from SLA $1.60 62-14961

Trans. of Sen-i Gakkaishi (Japan) 1956, v. 12, no. 7, p. 479-486.

DESCRIPTORS: Polymers, *Vinyl radicals, *Cyano radicals, *Ethyl ethers, Synthesis, Vapors, Vinyl alcohols, Acrylonitriles, Catalysis, Reaction kinetics, Alcohols.

The synthesis of polyvinyl cyanoethyl ether by the reaction of polyvinyl alcohol with acrylonitrile vapour, in the presence of NaOH catalyst was studied, including effects of the pretreat-swelling by catalyst (0-5 hrs.), amount of water and catalyst (H_2O/PVA wt. 0.1-2.5 and NaOH/PVA mol 0.01-0.34), time and temperature of the reaction (0.5-18 hrs. and 25-55°C) and atmospheric pressure in the reaction vessel (5-760 mmHg) on the rate of cyanoethylation. At a relatively higher temperature and catalyst concentration, a strikingly abnormal rate of cyanoethylation was observed. This may be due to the accompanying of the inverse reaction of cyanoethylation and the slight degree of hydrolysis of the cyano group. Assuming the reaction velocities of the first order for each reaction of the cyanoethylation, decyanoethylation and hydrolysis and the different velocity constants between the crystalline and amorphous regions of polyvinyl alcohol, a theoretical equation for the rate of cyanoethylation is derived. Giving the value of 60% for the accessibility of polyvinyl alcohol and the appropriate values corresponding to the conditions of the reaction for each reaction velocity constant, this equation shows the comparable trend with the experimental results in the principal points. (Author)

Porai-Koshits, A. E.
DEVELOPMENT OF THE CHEMISTRY OF ORGANIC DYESTUFFS AND INTERMEDIATE COMPOUNDS IN U. S. S. R. DURING THE TWENTY-FIVE YEAR PERIOD OF 1917-42. [1962] 4p. 52 refs.
Order from OTS or SLA $1.10 62-16805

[Abstract] trans. of Uspekhi Khimii (USSR) 1943, v. 12, no. 2, p. 134-164.

DESCRIPTORS: *Dyes, Organic compounds, Synthesis.

Razumov, A. I. and Bankovskaya, N. N.
SOME REACTIONS OF THE INTERMEDIATE PRODUCTS OF THE ARBUZOV REARRANGEMENT. [1962] 6p.
Order from ATS $7.75 ATS-81P63R

Trans. of mono. Khim[iya] i Primenenie Fosfor-organ[icheskikh] Soedin[enii] (Akad. Nauk SSSR, Kazansk Filial, tr. Konf. (no. 2) 1959) [Moscow] 1962, p. 94-98. A complete trans. of mono. is available from OTS or SLA $38.50 as 62-33349, JPRS-15432, 25 Sep 62 [1160]p.

DESCRIPTORS: *Phosphonic acids, *Esters, Synthesis, Chemical reactions.

Rosik, J., Zitko, V., and Vasatko, J.
FRACTIONATION OF PECTINS WITH DEAE-CELLULOSE (DIETHYLAMINOETHYLCELLULOSE). [1962] 7p.
Order from K-H $8.75 K-H 12159-a

Trans. of [Sbornik Chekhoslovatskykh Khimicheskykh Rabot] 1962, v. 27, p. 1346-1350.

DESCRIPTORS: *Pectins, Fractionation, Ethyl radicals, Amines, *Cellulose.

Sadowska, W., Zakrzewski, L., and Fejgin, J.
STABILIZATION OF POLYFORMALDEHYDE, PT. 1. [1962] 7p.
Order from ATS $9.75 ATS-09P62P

Trans. of Przemysl Chem[iczny] (Poland) 1962, v. [18]41, no. 1, p. 40-43.

DESCRIPTORS: *Stabilization, *Formaldehyde, *Polymers.

Shostakovskii, M. F. and Sidel'kovskaya, F. P.
RESEARCH ON POLYMERIZATION OF VINYL ETHERS: VINYL ISOBUTYL ETHER. [1962] 4p. 8 refs.
Order from OTS or SLA $1.10 62-16830

[Abstract] trans. of Zhurnal Obshchei Khimii (USSR) 1943, v. 13, no. 6, p. 428-435.

DESCRIPTORS: *Vinyl radicals, *Butyl radicals, *Ethers, Polymerization.

Strukov, I.
OBTAINING TRIMETHYLENE CHLOROBROMIDE. [1962] 5p. 5 refs.
Order from SLA $1.10 62-16283

Trans. of unidentified article from the Synthetic Chemistry Division of NIKhFI, n.p., n.d.

DESCRIPTORS: *Methanes, *Chlorides, *Bromides, Production, Solar energy, Allyl radicals.

Large yields of trimethylene chlorobromide were obtained by the absorption of HBr by allyl chloride. There is no large scale simultaneous production of propylene chlorobromide or reversion to allyl chloride it the reaction proceeds in direct sunlight and if the HBr is generated from PBr_3 and water. Smaller quantities of trimethylene dibromide were obtained by the same method from HBr and allyl bromide.

Sugino, Kiichiro.
ELECTRO-ORGANIC CHEMISTRY. [1961] [26]p. (illus. ommitted) 57 refs. AERDL T-1080; RIS E 693.
Order from OTS or SLA $2.60 61-28940

Trans. of Kagaku (Japan) 1957, v. 12, p. 349-358. Also available from RIS $50.00 as RIS E-693.

DESCRIPTORS: *Electrochemistry, Organic compounds. Cathodes (Electrolytic cell), Reduction, Mercury electrodes, Catalysis, Electrolytes, Anodes (Electrolytic cell), Oxidation, Free radicals, Bibliography.

Swarts, F.
ON HEXAFLUOROETHANE. [1962] [4]p. (figs. tables omitted) 3 refs.
Order from SLA $1.10 62-16479

Trans. of Soc[iété] Chim[ique de] Belgique. Bull[etin] 1933, v. 42 [no. 1] p. 114-118.

DESCRIPTORS: *Fluorine compounds, *Ethanes, Physical properties, Chemical properties.

Takahashi, Torizo and Senda, Shigeo.
SYNTHESIS OF BASIC PHENOL-ALKYL ETHERS, REPT. V. [1962] 5p. 4 refs.
Order from SLA $1.10 62-16293

Trans. of Japanese language article from unidentified source [1958].

DESCRIPTORS: *Ethers, Alkyl radicals, Phenols, *Phenyl ethers, Synthesis, Alcohols, Chlorides.

Basic phenol-alkyl ethers were synthesized for the purpose of substituting ergots. The yield of (β-chloroethyl)-(2-formyl-6-ethyl-phenyl) ether (I) was increased considerably by adding potassium iodide to the reaction system. By condensation of diallylamino with compound I, (β-diallyl amino-ethyl)-(2-formyl-y-allyl-phenyl)-ether was obtained. Amino alcohols were prepared by reducing diethylamino acetones with sodium amalgam or sodium and alcohol. The product was treated in the presence of thionyl chloride to synthesize α-diethylamion isopropyl chloride (II). When compound II was condensed with alkali salts of 3-allyl-salicylaldehyde, (α-methyl-β-diethylamino-ethyl)-2-formyl-6-isopropyl-allyl-phenyl)-ether was obtained.

Utzinger, G. Ed. and Regenass, F. A.
A SPECIFIC REAGENT FOR ALDEHYDES, I. [1962] 6p.
Order from K-H $7.50 K-H 3504 c

Trans. of Helv[etica] Chim[ica] Acta (Switzerland) 1954, v. 37, p. 1901-1903.

DESCRIPTORS: *Reagents, *Aldehydes.

Yamaguchi, Tadashi and Amagasa, Masataka.
A STUDY ON THERMAL DEGRADATION PRODUCTS OF POLYVINYL ALCOHOL. [1962] 14p. 3 refs.
Order from SLA $1.60 62-16002

Trans. of Kobunshi Kagaku (Japan) 1961, v. 18, no. 198, p. 645-652.

DESCRIPTORS: Polymers, *Vinyl alcohols, Pyrolysis, Chemical analysis, Acetaldehydes, Benzaldehydes, Acetophenones, Alcohols, Vinyl radicals.

In order to probe the mechanism of thermal decomposition of PVA, the residue from thermal decomposition of PVA and thermal decomposition products of PVA were investigated. There were some differences in quantity depending on whether the thermal decomposition took place in vacuum, in nitrogen current, or in the presence of air, but as decomposition products we

confirmed besides water acetaldehyde, crotonaldehyde, benzaldehyde, and acetophenone; the presence of phenolic compounds was also estimated. (Author)

Yamaguchi, Tadashi and Amagasa, Masataka.
THERMAL DEGRADATION MECHANISM OF POLYVINYL ALCOHOL. [1962] 6p. 4 refs.
Order from SLA $1.10 62-16001

Trans. of Kobunshi Kagaku (Japan) 1961, v. 18, no. 198, p. 653-655.

DESCRIPTORS: Polymers, *Vinyl alcohols, Pyrolysis, Chemical reactions, Alcohols, Vinyl radicals.

The thermal degradation mechanism of polyvinyl alcohol (PVA) is discussed according to the results of investigation about colorisation and degradation at heat treatment. (See also 62-16002)

Yamauchi, S.
[STUDY OF] THE PRODUCTION OF FORMALDEHYDE FROM METHANOL. VI. STUDY OF REACTORS FOR THE PRODUCTION OF FORMALDEHYDE. [1962] 17p.
Order from ATS $24.50 ATS-01P63J

Trans. of Yuki Gosei Kagaku Kyokai Shi (Japan) 1961, v. 19, no. 4, p. 332-339.

DESCRIPTORS: *Formaldehyde, Production, *Methanols, Chemical reactions.

Zal'kind, Yu. S. and Ivanov, A. P.
ADDITION OF HYDROGEN TO ACETYLENE DERIVATIVES. XXXIII. CATALYTIC HYDROGENATION OF PHENYLATED BUTYNEDIOLS IN THE PRESENCE OF COLLOIDAL PALLADIUM. [1962] 3p. 10 refs.
Order from OTS pr SLA $1.10 62-16833

[Abstract] trans. of Zhurnal Obshchei Khimii (USSR) 1941, v. 11, no. 10, p. 803-816.

DESCRIPTORS: *Acetylene derivatives, Phenyl radicals, *Butanols, Hydrogenation, *Palladium catalysts, Colloids, Glycols, Hydrogen.

Physical Chemistry

Azarov, K. and Serdyukova, N.
THE EFFECT OF ALUMINA GEL ON THE PROPERTIES OF ENAMEL SLIPS. Pt. 3 of Study of the Properties of Enamel Slips. [1962] 5p. (figs. tables refs. omitted).
Order from OTS or SLA $1.10 62-16920

Trans. of [Kolloidnyi Zhurnal] (USSR) 1938, v. 4 p. 699-704.

DESCRIPTORS: *Gels, *Aluminum compounds, Hydroxides, *Enamel coatings, *Feldspar, Elasticity, Stability.

Bogdanova, N. I. and Ariya, S. M.
ELECTROCONDUCTIVITY OF LOWER VANADIUM OXIDES. [1962] [6]p. 10 refs.
Order from OTS or SLA $1.10 62-10649

Trans. of Leningrad U. Vestnik (USSR) 1961, v. 16 [no. 16] Ser[iya] Fiz[ika i] Khim[ii] no. 3, p. 143-147.

DESCRIPTORS: *Vanadium compounds, *Oxides, Chemical analysis, Electrical conductance, *Electrochemistry.

Constatinides, Giorgio.
AUTOCOMBUSTION TEMPERATURE OF MONOSACCHARIDES AND OLIGOSACCHARIDE POWDERS. [1962] 17p.
Order from K-H $21.25 K-H 6196-b

Trans. of Annali di Chimica (Italy) 1951, v. 41, p. 309-319.

DESCRIPTORS: *Sacchrides, Powders, Combustion.

Dushin, Yu. A.
THE RATE OF DECOMPOSITION (BURNING) OF POLYMERS IN A HIGH-TEMPERATURE GASEOUS MEDIUM. 18 June 62 [8]p.
Order from OTS or SLA $1.10 62-33369

Unedited rough draft trans. of Inzhenerno-Fizicheskii Zhurnal (USSR) 1961, v. 4, no. 10, p. 123-126.

DESCRIPTORS: *Polymers, Decomposition, Combustion, Reaction kinetics, Gases, High temperature research.

Efremova, G. D. and Pryanikova, R. O.
LIQUID-LIQUID EQUILIBRIUM IN THE SYSTEM ACETIC ACID-WATER-BUTANE. [1962] 5p.
Order from ATS $5.75 ATS-39P63R

Trans. of Khim[icheskaya] Prom[yshlennost'] (USSR) 1961, no. 8, p. 564-566.

DESCRIPTORS: *Acetic acids, Water, *Butanes, Liquids, Phase studies, *Chemical equilibrium.

Faizullin, F. F., Kochman, E. D., and Turashev, A. I.
OSCILLOGRAPHIC STUDY OF THE ANODIC BEHAVIOR OF IRON IN NaOH SOLUTIONS. [1962] 4p.
Order from ATS $7.75 ATS-76P62R

Trans. of Kazan U. Uch[enye] Zap[iski] (USSR) 1956, v. 116, no. 5, p. 77-81.
Another trans. is available from SLA as R-4160.

DESCRIPTORS: *Oscillographs, *Iron, Solutions, Anodes (Electrolytic cells), *Hydroxides, Sodium compounds.

Fukumoto, Osamu.
ON THE KINETICS OF BECKMANN'S REARRANGEMENT. Rept. 4 of Studies on the Production of ε-Caprolactam. Oct 62, 12p. 5 refs.
Order from SA $19.00 SA Code-G511

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64, no. 7, p. 1285-1289.

DESCRIPTORS: *Lactams, Production, Sulfuric acid, Cyclohexanones, Oximes, Ionization, Dehydration, *Reaction kinetics.

Itin, A. V.
EXPERIMENTAL INVESTIGATION OF IGNITION OF MINE GAS BY SPARKS FROM ELECTRICAL CIRCUITS AT DIFFERENT FREQUENCIES (Eksperimental'noe Issledovanie Vosplameneniya Rudnichnogo Gaza Iskrami Voznikayushchimi v Elektricheskikh Tsepyakh Razlichnoi Chastoty). Feb 62 [17]p. 5 refs. RTS 2067.
Order from OTS or SLA $1.60 62-24072

Trans. of Dnepropetrovskii Gornyi Institut. Izvestiya (USSR) 1955 [v. 24] no. 3, p. 191-200.

DESCRIPTORS: Gases, *Methanes, Ignition, Sparks, High frequency, Circuits, Electric currents.

The supposition of V. M. Thornton, that power circuits of medium carrying capacity at increased frequencies (150 c/s) will be safe as regards sparking, is completely disproved by our experiments. Existing suppositions, that the frequency of the current has no effect at all on the igniting capacity of electric sparks, are also completely disproved by our experiments. It is established that increased and high ac frequencies have an undoubtec effect on the igniting capacity of electric sparks that arise when the circuit is broken. Raising the frequency from 50 to between 1 000 and 8 000 c/s multiplies the minimum igniting current by 1.5 to 2.0, and raising it from 50 to 100 000 c/s multiplies it by 7 to 10. (Author)

Jelinek, Jaromir F.
THE THERMODYNAMICS OF THE DEMETHYLATION OF CRESOLS. 6 Jan 60 [16]p. 13 refs. CTRA Technical note no. 82; [DSIR LLU] M 1589.
Order from OTS or SLA $1.60 60-19977

Trans. of Chemicky Prumysl (Czechoslovakia) 1957, v. 7(32) no. 1, p. 4-8.

DESCRIPTORS: *Cresols, Methyl radicals, Alkyl radicals, Decomposition, Pyrolysis, Catalysis, *Thermodynamics, Chemical equilibrium.

The equilibrium constants and the theoretical yields of the demethylation of cresols are calculated. The calculated results are compared with the experimental results of the thermal and catalytic demethylation of p-cresol. (Author)

Kogan, E. V., Mozhaev, A. P., and Smirnov, N. I.
ULTRASONIC APPARATUS FOR ANALYSIS OF A REACTION MEDIUM. [1962] 7p. 4 refs.
Order from OTS or SLA $1.10 62-14824

Trans. of #Zhur[nal] Priklad[noi] Khim[ii] (USSR) 1961, v. 34 [no. 3] p. 541-547.

DESCRIPTORS: *Polymerization, Reaction kinetics, Analysis, *Ultrasonic equipment, Circuits.

Korzhinskii, D. S.
THE PHASE RULE AND SYSTEMS WITH FULLY MOBILE COMPONENTS. [1962] 4p.
Order from ATS $8.00 ATS-39P62R

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1949, v. 64, no. 3, p. 361-364.

DESCRIPTORS: *Phase studies, Phase transitions.

Kulakova, I. I. and Shashkina, A. V.
THE REDUCTION MECHANISM AND THE ELECTROREDUCTION OF ACRYLIC ACID ON A Pd-ELECTRODE. [1962] 4p.
Order from ATS $6.75 ATS-18P62R

Trans. of Moscow U. Vestnik. Ser[iya] 2: Khim[iya] (USSR) 1962, v. 17, no. 2, p. 36-39.

DESCRIPTORS: Electrophoresis, *Acrylic acids, *Palladium, *Electrodes, Reduction.

Kurczyk, H. G. and Schwiete, H. E.
ELECTRON MICROSCOPE AND THERMOCHEMICAL STUDIES OF THE HYDRATION OF CALCIUM SILICATES $3CaO.SiO_2$ AND β-$2CaO.SiO_2$ AND THE EFFECT OF CALCIUM CHLORIDE AND GYPSUM ON THE HYDRATION PROCESS. [1962] [44]p. (22 figs. 30 refs. omitted) 3 refs.
Order from SLA $4.60 62-14276

Trans. of Tonindustrie-Zeitung (West Germany) 1960, v. 84, no. 24, p. 585-598.

DESCRIPTORS: *Cements, *Calcium compounds, *Silicates, Chlorides, *Gypsum, Hydrides, Hydrogen ion concentration, Microstructure, Electron microscopy, *Thermochemistry.

Loiseleur, Jean and Catinot, Lilianot.
PHYSICAL CHEMISTRY: A GENERAL METHOD FOR THE PREPARATION OF AEROSOLS BY THE COMBUSTION OF CELLULOSE. [1962] 3p.
Order from K-H $3.75 K-H 9353-b

Trans. of Academie des Sciences [Paris]. Comptes Rendus (France) 1957, v. 244, no. 8 [p. 1039-1040] (pub. by Gauthier-Villars et Cie, Paris).
Another trans. is available from SLA mi$1.80, ph$1.80 as 61-10919 [1961] 3p.

DESCRIPTORS: *Cellulose, *Combustion, *Aerosols, Production, Physical chemistry.

Matsuura, Ryo.
HYDROGEN-REDUCTION REACTION OF VANADIUM PENTOXIDE GRANULES CONTAINING VARYING AMOUNTS OF MOLYBDENUM TRIOXIDE. Rept. no. 5 of Studies on Vanadium Pentoxide Catalysts. [1962] 7p. 5 refs.
Order from SLA $1.10 62-10694

Trans. of Nihon Kagaku Zasshi (Japan) 1961, v. 82, no. 4, p. 421-423.

DESCRIPTORS: *Vanadium catalysts, Vanadium compounds, *Oxides, Hydrogen, Reduction, Grains (Metallurgy), *Molybdenum compounds, Eutectics, Reaction kinetics.

Granular vanadium pentoxide catalysts containing varying amounts of molybdenum trioxide were made by the same method as in the Third report (available in translation from SLA as 62-10693) hydrogen-reduction velocity was similarly measured, and the BET surface area was measured by nitrogen adsorption. It was found as a result that the reduction velocity increased by addition of molybdenum trioxide, but that this mainly shortened the induction period and had very little influence on the velocity of the stationary reaction, which was affected by diffusion. The extent of increase of the surface area by reduction depended on the molybdenum trioxide content, but it was found that in the case of a eutectic mixture, the surface area increased accompanying reduction, and that the surface area of a specimen containing an abundance of molybdenum trioxide increased markedly in the last stage of reduction. (Author) (See also 62-10692)

Ogawa, Eijiro.
CATALYTIC REACTION IN A MAGNETIC FIELD. [1962] 14p.
Order from SLA $1.60 62-16284

Trans. of article from an unidentified source, 1939.

DESCRIPTORS: *Catalysis, *Magnetic fields, Ethylenes, Hydrogen, Ethanes, Bromides, Propanes.

Two reactions are reported here. One is the gaseous reaction between ethylene and hydrogen to evolve ethane and the other is the liquid reaction in which liquid hydrogen bromide is added to an aryl bromide to form dibromo propane.

Rab, Frantisek.
THE ELECTRICAL CONDUCTIVITY OF ELECTROLYTES. [1961] [5]p. (4 figs. 2 tables omitted). RIS E-733.
Order from OTS or SLA $1.10 61-28937

Trans. of article from unidentified source, pub. by Chemical Dept. of the VSZ, Brno [Czechoslovakia]. Also available from RIS $7.50 as RIS E-733.

DESCRIPTORS: *Electrolytes, Electrical conductance, Measurement, Electrometers.

Roginskii, S. Z.
THEORETICAL PRINCIPLES OF PREPARATION OF CATALYSTS. I. METHODS OF ACHIEVING AND REGULATING SUPERSATURATION. [1962] 4p. 10 refs.
Order from OTS or SLA $1.10 62-16814

[Abstract] trans. of Zhurnal Prikladnoi Khimii (USSR) 1944, v. 17, no. 1/2, p. 3-15.

DESCRIPTORS: *Catalysts, Preparation, Supersaturation.

Sergeev, G. T.
HEAT AND MASS TRANSFER DURING EVAPORATION OF A LIQUID IN A FORCED GAS FLOW. 8 June 62 [8]p. 8 refs. FTD-TT-62-327.
Order from OTS or SLA $1.10 62-25831

Unedited rough draft trans. of Inzhenerno-Fizicheskii Zhurnal (USSR) 1961, v. 4, no. 2, p. 77-81.

DESCRIPTORS: *Gas flow, Liquids, Water, Acetones, Benzenes, Butanols, *Evaporation, *Heat transfer, *Mass transfer.

Süe, P. and Caillat, R.
VALENCES OF RADIOPHOSPHORUS OBTAINED BY NEUTRON IRRADIATION OF COLORED AND DECOLORIZED NaCl CRYSTALS, tr. by Bertha P. Klenova. 1 Nov 50, 2p, 1 ref. TVA 2965.
Order from OTS or SLA $1.10 62-32248

Trans. of [Academie des Sciences, Paris]. Compt[es] Rend[us] (France) 1950, v. 230, p. 1864-1865 (pub. by Gauthier-Villars et Cie, Paris).

DESCRIPTORS: *Radiochemistry, Radioactive isotopes, *Phosphorus, *Valence, Neutrons, *Crystals, Sodium compounds, Chlorides.

The proportion of the P^{+++++} and $P^{(+++++}$ valences varies depending upon whether NaCl is irradiated by neutrons and treated before or after decolorization. Thus on the average P^{+++++} = 43% in the colored salt and P^{+++++} = 30% in the decolorized NaCl. (Author)

Terenin, A. and Putzeiko, E.
OPTICAL SENSITIZATION OF SEMI-CONDUCTORS BY CHLOROPHYLL AND APPARENT PIGMENTS. [1962] 12p. (8 figs. refs. omitted).
Order from SLA $1.60 62-16526

Trans. of J[ournal de] Chim[ie] Physique (France) 1958, v. 55 [no. 9] p. 681-687.

DESCRIPTORS: *Semiconductors, Optics, Sensitivity, *Chlorophylls, *Pigments.

Ushakov, S. N., Lavrent'eva, E. M. and others.
POLYVINYL ACETAL COATINGS FOR MAKING CONCRETE IMPERMEABLE TO GASOLINE. [1962] 9p. 17 refs.
Order from OTS or SLA $1.10 62-14612

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1944, v. 17 [no. 1/2] p. 125-136.

DESCRIPTORS: *Gasoline, Permeability, *Concrete, Coatings, *Acetals, Polymers, *Vinyl radicals, *Plastic coatings.

The mechanical strength, swelling, permeability to water and gasoline were determined of films of polyvinyl acetate and polyvinyl acetals, free and in the form of coatings on concrete. The dependence of the properties of the coatings upon the extent of polymerization and the nature of the substituent in the acetal of polyvinyl alcohol, as well as upon the extent of plastification and the nature of the plasticizer were also established. Acetal coatings were found to be satisfactory for the purpose of making concrete impermeable to gasoline. (Author)

Varbanskaya, R. A., Shelimov, B. N., and Fok, N. V.
THE REACTIONS OF "HOT" METHYL RADICALS IN THE SOLID PHASE AT LOW TEMPERATURES. 21 June 62 [10]p. 10 refs. FTD-TT-62-824; AD-283 896.
Order from OTS or SLA $1.10 62-33367

Unedited rough draft trans. of Akademiya Nauk SSSR. Doklady, 1961, v. 140, no. 4, p. 818-821.

DESCRIPTORS: *Methyl radicals, Iodides, Methanes, Acetones, Acetaldehydes, Chemical reactions, *Photolysis, Ultraviolet radiation, Spectrographic analysis, *Low temperature research, Solids.

The purpose of the present work was to study the conversions and the conditions for the stabilization of methy radicals obtained on photolysis of methyl iodide, azomethane, acetone, and acetaldehyde at 77°K and to explain the role of "hot" radicals in these processes. In solving this problem we used data on the analysis of the gaseous reaction products and epr data. (Author)

EARTH SCIENCES

Reshetov, G. D.
CLOUDINESS AT HIGH ALTITUDES. 18 June 62, 2p. AID rept. 62-81.
Order from OTS or SLA $1.10 62-32118

Abstract trans. of Meteorologiya i Gidrologiya (USSR) 1962, no. 4, p. 39-43.

DESCRIPTORS: *Clouds, High altitude, *Weather forecasting, Atmosphere, Cirrus clouds, Cumulus clouds, Stratus clouds.

Climatology and Meteorology

Frankenberger, Ernst
INVESTIGATIONS OF THE VERTICAL EXCHANGE IN THE LOWER DECAMETERS OF THE ATMOSPHERE (Untersuchungen über den Vertikalaustausch in den Unteren Dekametern der Atmosphäre) tr. by Angelo F. Spano. July 59 [27]p. 15 refs.
Order from OTS or SLA $2.60 59-18846

Trans. of Annalen der Meteorologie (West Germany) 1951, v. 4, no. 7/9, p. 358-374.

DESCRIPTORS: *Atmosphere, *Wind, Temperature, Humidity, Measurement, Boundary layer, Convection, *Vertical gust recorders, Meteorological instruments, Thermometers, Hygrometers.

Details are given on new instruments for measuring slight differences of temperature or humidity. A new procedure is used for testing vertical profiles of temperature as to the existence of internal boundary layers. Homogeneous profiles of vertical gradients of temperature, wind velocity and humidity, measured near Quickborn/Holst. in the lowest atmospheric layers above the microclimate zone on wind-forces exceeding 3 m/sec are shown to be not at variance with the theoretical estimates of the boundary layer theory. That theory, however, applies to the vertical exchange of heat and atmospheric pollutions up to that level only. Differences between the vertical exchange coefficients for heat and impulse arise in case of convection. Under certain conditions it is possible to determine how much the convection and how much the turbulent exchange contribute to the total exchange. The results of the first experiments made to test methods for the determination of vertical exchange coefficients are given. Various comparisons agreed in inferring from the measurements, carried out up to now in the shallow valley of the Pinnau, that the vertical exchange of momentum was about 40% smaller than the mean value of the vertical exchange found over more extended plain areas. The temperatures and humidities as well as their vertical gradients are accordingly larger than over plains. (Author)

Stafsom, Bjorn-Ivar.
APPARATUS FOR THE PRODUCTION OF WATER VAPOR-AIR MIXTURES WITH CONTROLLED RELATIVE HUMIDITY. [1962] 9p.
Order from K-H $11.25 K-H 3649

Trans. of Svensk Pappers-tidning, 1955, v. 58, 31 May, p. 392-394.

DESCRIPTORS: *Air, Water vapor, *Humidity, Control, Instrumentation.

Geography

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 36 (GEOGRAPHY SERIES). 5 Nov 62 [21]p. JPRS: 16027.
Order from OTS or SLA $2.60 62-33700

Trans. of selected abstracts from Referativnyi Zhurnal. Geografiya (USSR) 1962, no. 4.

DESCRIPTORS: *Abstracts, *Geography, *China.

Semenov, A. I.
TOURIST ROUTES FOR NOVGORODSKAYA OBLAST. 13 July 62 [56]p. (photos omitted). JPRS: 14458.
Order from OTS or SLA $5.60 63-13108

Trans. of mono. Turistski'e Marshruty po Novgorodskoi Oblasti, Novgorod, 1961, 80p.

DESCRIPTORS: *Geography, *Roads, *Urban areas, Industrial plants, Structures, *Terrain, Lakes, Rivers, History.

Geology

BULLETIN OF THE MOSCOW SOCIETY FOR NATURAL RESEARCH. GEOLOGICAL SECTION, 1956, VOL. 31(61) NOS. 4-6. 1962, 410p. refs. PL-480 Int.
Order from OTS $4.25 61-11402/4-6

Trans. of Moskovskoe Obshchestvo Ispytatelei Prirody. Byulleyen'. Otdel Geologicheskii (USSR) 1956, v. 31(61) nos. 4, 5, 6.

DESCRIPTORS: *Geology, Periodicals, Earth, Surface area, Water supplies, Hydraulic reservoirs, Soils, Permeability, Mountains, Ores, Petrology, Rock, Deposits, Hydrology, Coral reefs, Sedimentation, Crustacea, Insects, Paleoecology, Geochemistry, Sand, Lithosphere, Clays, Deserts, Deltas, Foraminifera.

DECREE ON THE FEDERAL GEOLOGICAL INSTITUTE NO. 356. (Uredba o Saveznom Geoloskom Zavodu) 11 Apr 61 [11]p. JPRS: 9048.
Order from OTS or SLA $1.60 62-19351

Trans. of Sluzbeni List, Belgrade (Yugoslavia) 1960, v. 16, no. 26, p. 534-536.

DESCRIPTORS: *Geology, Research program administration, Yugoslavia

SOVIET-NORTH KOREAN SCIENTIFIC AND TECHNICAL COOPERATION. 10 Mar 61 [12]p. JPRS: 7800.
Order from OTS or SLA $1.60 62-19453

Trans. of Choson Kwahakwon T'ongbo [sic] (North Korea) 1959, no. 5, p. 4-7 and 59-61.

DESCRIPTORS: *Scientific research, Scientific organizations, *Geology, *North Korea.

Contents:
Internationalist proletarian aid given by the Soviet people for scientific development in our country
Status of progress in joint geological research work between the academies of sciences of Korea and the USSR.

Bondar, O. G.
NEW INFORMATION ON RADON WATERS OF THE BELAYA TSERKOV REGION. 27 Sep 62 [7]p. 7 refs. JPRS: 15464.
Order from OTS or SLA $1.10 62-33344

Trans. of Akademiya Nauk URSR, Kiev. Dopovidi, 1962, no. 6, p. 789-791.

DESCRIPTORS: *Radon, Water, *Hydrology, Sources, Geology

Chugaeva, M. N.
ON THE PALEOZOIC DEPOSITS OF THE VERKHNII POLOVINNYI KAMEN' (THE RIGHT-HAND BANK OF THE RIVER KOLYMA) (O Paleozoiskikh Otlozheniyakh Verkhnego Polovinnogo Kamia, Pravyi Bereg Kolymy) tr. by Ivan Mittin. 1961 [10]p. 7 refs. GS-95.
Order from OTS or SLA $1.10 62-15737

Trans. of Akademiya Nauk SSSR. Doklady [1961] v. 137, no. 2, p. 400-402.

DESCRIPTORS: *Geological survey, *Geology, *Geological time, Mountains, Volcanoes, Rock, Deposits, Stratification, *Geophysics, Terrain.

There is a very substantial difference in the geologic development of the western and eastern frameworks of the Kolyma median massif. It lies in the considerable decrease in the thickness of the Ordovician deposits, the nearly complete absence of the Silurian with exception of its uppermost beds, and in the appearance of volcanic rocks in the top of the Middle Devonian. (Author)

Ekiert, F. and Konstantynowicz, E.
NONFERROUS ORE DEPOSITS IN BULGARIA. 28 Oct 58 [10]p. JPRS(NY)-L-383.
Order from OTS or SLA $1.10 PB 141 282T

Trans. of Przeglad Geologiczny (Poland) 1958, v. 6, no. 5(62) p. 229-232.

DESCRIPTORS: *Ores, *Bulgaria, Minerals, Mining engineering, Geophysical prospecting, *Copper, *Zinc, *Lead, *Iron

A definite geologic similarity was established between some Bulgarian and Polish ore deposits. (Author)

Fedorov, E. K.
ALCUNI COMPITI DELLE GEOFISICA MODERNA (Some Tasks of Modern Geophysics). 15p. CNP-53. (text in Italian).
Order from OTS or ETC $1.85 62-26125

Trans. of Akademiya Nauk SSSR. Vestnik, 1959 [v. 29] no. 1 [p. 24-31].

DESCRIPTORS: *Geophysics.

Kiselev, M. I.
THE CONDITIONS AND TASKS OF GEOPHYSICAL WORK FOR GOLD. 31 Aug 62 [9]p. JPRS: 15072.
Order from OTS or SLA $1.10 62-32881

Trans. of Geofizicheskaya Razvedka (USSR) 1961, no. 5, p. 94-103.

DESCRIPTORS: *Gold, *Geophysical prospecting, Geology.

Lymarev, V. I.
GEOMORPHOLOGICAL CHARACTERISTICS OF THE LATEST TRANSGRESSION OF THE ARAL SEA.
13 Nov 62 [27]p. 17 refs. JPRS: 16163.
Order from OTS or SLA $2.60 63-13083

Trans. of Akademiya Nauk SSSR. Laboratoriya Ozerovedeniya. Trudy, 1960, v. 10, p. 36-44.

DESCRIPTORS: *Aral Sea, *Geology, Morphology.

Mel'kov, V. G. and Pukhal'skii, L. Ch.
SEARCH FOR URANIUM DEPOSITS. Feb 62, 345p.
Order from OTS $4.50 AEC-tr-4529

Trans. of mono. Poiski Mestorozhdenii Urana, Moscow, 1957.

DESCRIPTORS: *Uranium, *Deposits, *Geology, Geophysical prospecting, *Minerals, Geochemistry, Radioactivity, Gamma rays, Well drilling, Sampling, Radiometers, Hydrology, Geological survey, Mining engineering.

Mosetti, F. and Maranzana, F.
STUDY OF THE LAW OF VARIATION OF THE ELECTRICAL CONDUCTIVITY OF A POROUS MATERIAL AS A FUNCTION OF ITS WATER CONTENT. [1962] 6p.
Order from ATS $9.50 ATS-61P621

Trans. of Boll[ettino di] Geofis[ica] Teor[ica] ed Appl[icata] (Italy) 1961, v. 3, no. 11, p. 209-214.

DESCRIPTORS: *Geophysics, *Porous materials, Electrical conductance, Water.

Pidhayny, Th.
STRATIGRAPHY, tr. by Black. [1961] 37p.
Order from OTS or SLA $3.60 62-15288

Trans. of mono. Brachiopods and Corals of Eifelian and Bauxitic Deposits of the Eastern Slope of the Central and Northern Urals, Moscow, 1959, p. 134-146.

DESCRIPTORS: *Geology, *Stratification, *Geological survey, Bauxite, Deposits, Paleoecology, *Coral reefs, Aquatic animals.

Pokrovskaya, G. N. and Kalabin, Yu. Ya.
DYNAMIC POROSITY AND ITS POSSIBLE UTILIZATION IN COMPUTATIONS OF OIL RESERVES. [1962] 10p.
Order from ATS $12.75 ATS-02P63R

Trans. of #Geol[ogiya] Nefti i Gaza (USSR) 1962, v. 6, no. 4, p. 46-51.

DESCRIPTORS: *Geophysical prospecting, *Petroleum, Oils, Porosity.

Polevaya, N. I.
ABSOLUTE GEOLOGICAL TIME-SCALE ACCORDING TO GLAUCONITES. [1962] 11p.
Order from ATS $14.75 ATS-71P61R

Trans. of Akad[emiya] Nauk SSSR. Lab[oratoriya] Geologii Dokembriya. Trudy, 1961, v. 12, p. 123-132.

DESCRIPTORS: *Geological time, Petrology.

Zhigach, K. F., ed.
INDUSTRIAL AND EXPLORATORY GEOPHYSICAL PROSPECTING. Sep 62, approx. 140p.
Order from CB $17.50

Trans. of unidentified Russian mono. issued as the Transactions of the Ministry of Higher and Intermediate Education in the RSFSR, n.d.

DESCRIPTORS: *Geophysical prospecting, Natural gas, *Well logging, *Neutrons, Boreholes, *Rock, Physical properties, *Ores, Manganese, Boron, *Seismic waves, Gravity anomalties, Terrestrial magnetism.

Mineralogy

Bausch, W. M. and Wiontzek, H.
PETROGRAPHIC INVESTIGATIONS OF THE REHDEN MAIN DOLOMITE. [1962] 15p.
Order from ATS $21.50 ATS-00P63G

Trans. of Erdöl und Kohle (West Germany) 1961, v. 14, no. 9, p. 686-692.

DESCRIPTORS: *Petrology, Rock, Minerals, *Dolomite.

Bykov, V. P. and Sorokin, I. V.
X-RAY SPECTRAL FLUORESCENT ANALYSIS OF MINERAL RAW MATERIALS. [1962] 5p.
Order from ATS $7.50 ATS-12P63R

Trans. of #Zavodsk[aya] Lab[oratoriya] (USSR) 1961, v. 27, no. 11, p. 1371-1374.

DESCRIPTORS: *Minerals, *X-ray spectroscopy, Spectrographic analysis, *Fluorescence.

Eliseev, E. N.
X-RAY STUDY OF MINERALS OF THE ISOMORPHOUS SERIES FORSTERITE-FAYALITE (Rentgenometricheskoe Izuchenie Mineralov Izomorfnogo Ryada Forsterit-Fayalit). [1962] [39]p. (foreign text included) 19 refs.
Order from OTS or SLA $3.60 62-14576

Trans. of Vsesoyuznoe Mineralogicheskoe Obshchestvo. Zapiski (USSR) 1957, v. 86, no. 6, p. 657-670.

DESCRIPTORS: *Minerals, X-rays, Magnesium, Iron, Chemical analysis, Crystals, Lattices.

In the present article X-ray data are given for members of the isomorphous series forsterite--fayalite of varying composition; by means of these data the composition of olivine may be determined. On the basis of experimental data, regularities of change in the dimen-

sions of the crystal lattice of olivine, caused by the isomorphous displacement of magnesium by iron, are derived. (Author)

Korzhinskii, D. S.
THE RELATIONSHIP BETWEEN MINERALOGICAL COMPOSITION AND THE CHEMICAL POTENTIAL OF COMPONENTS. [1962] 11p.
Order from ATS $19.50 ATS-41P62R

Trans. of Vses[oyuznoe] Mineral[ogicheskoe] Obshchestvo. Zapiski (USSR) 1944, v. 73, no. 1, p. 62-73.

DESCRIPTORS: *Minerals, Chemical properties.

Nazarova, A. S.
TWO GENERATIONS OF SPODUMENE FROM PEGMATITES, tr. by Michael Fleischer. 19 July 62, 7p. 6 refs.
Available on loan from OTS or SLA 62-33703

Trans. of Mineralog[icheskii] Sbornik (USSR) 1961, v. 15, p. 182-188.

DESCRIPTORS: Minerals, *Spodumene, Crystals, Sources, *Pegmatites, Deposits, Siberia.

Spodumene I, composing the main mass of this mineral, originated during the first phase of the formation of pegmatites and was partly replaced during the period of albitization. Spodumene II was formed during the final stage of albitization, as a result of a redeposition of a part of lithium, alkalesced during the process of sodium metasomatosis from spodumene I and is located mainly in the albitized parts of pegmatites. About 10-15% of all lithium extracted from the ore is connected with it, and it is likely that this generation of spodumene may be found in other deposits of rare-metal pegmatites. (Author)

Ottemann, Joachim.
FLUORESCENT X-RAY SPECTROMETRY AND MINERAL ANALYSIS. [1962] 21p. (figs. omitted) 26 refs.
Order from SLA $2.60 62-16292

Trans. of article from an unidentified source [1958].

DESCRIPTORS: *Minerals, Ores, Crystal structure, Analysis, *X-ray spectroscopy, Fluorescence.

After a brief summary of the historical development of X-ray spectroscopy, its fundamentals and particulars are discussed. (Author)

Oceanography

Alekseev, A. P. and Istoshin, B. V.
SOME RESULTS OF OCEANOGRAPHIC RESEARCH IN THE NORWEGIAN AND GREENLAND SEAS. 1961 [19]p. (figs. omitted) 7 refs. [DSIR NLL] M. 3569.
Order from OTS or SLA $1.60 62-24691

Trans. of mono. [Sovetskie Rybo Khozyaistvennye Issledovaniya v Moryakh Evropeiskogo Severa] (Soviet Fisheries Investigations in North European Seas) Moscow, 1960, p. 23-36.

DESCRIPTORS: *Norwegian Sea, *Greenland Sea, Oceanography, Herring, *Ocean currents, Temperature, *Oceanographical data, Thermal radiation, Periodic variations.

Dubov, V. P.
MODEL STUDIES OF ARAL SEA SEICHES. 24 Jan 62 [14]p. 7 refs. JPRS: 12075.
Order from OTS or SLA $1.60 62-15474

Trans. of Moskovskii Institut Inzhenerov Vodnogo Khozyaistva. Nauchnye Zapiski (USSR) 1958, v. 20, p. 321-329.

DESCRIPTORS: *Aral Sea, Simulation, Sea water, Tides, Oscillation, Oceanographic data

The state of the Aral Sea seiche problem is shown and the lack of adequate investigation is noted. A model method for studying seiches is described and its advantages over field observations shown. Seiches are investigated on a specially equipped model of the Aral Sea. Uni-, bi-, and trinodal longitudinal and a uninodal transversal seiche are detected; translating their periods into actual dimensions, their periods are equal to 21 hours 30 minutes, 10 hours 27 minutes, 6 hours 46 minutes, and 9 hours 10 minutes, respectively. The distribution of nodal lines and antinodes are vertical displacements is depicted in Figures 2-5. All seiches are well defined at the Aral Sea station. A beat phenomenon as the result of the overlapping of the binodal longitudinal and uninodal transversal seiches is detected. It is shown that it is necessary to use great caution in averaging the periods of seiches recorded by the tide gages, since a seiche, assumed to be a pure one, can turn out to be the superposition of two or three seiches with similar periods. A rational distribution of tide gage stations for the study of the seiches is recommended (Arals Sea station, Kugaral Island, Barsakel'mes Island, Ressurrection Island, Ken'-kamysh Bay, Obruchev area, and Chernyshev Bay). (Author)

Kislyakov, A. G.
FLUCTUATIONS IN THE REGIME OF THE SPITZBERGEN CURRENT. 1961 [19]p. (figs. omitted) 19 refs. [DSIR NLL] M. 3477.
Order from OTS or SLA $1.60 62-23948

Trans. of mono. [Sovetskie Rybo Khozyaistvennye Issledovaniya v Moryakh Evropeiskogo Severa] (Soviet Moscow, 1960, p. 39-49.

DESCRIPTORS: *Ocean currents, Hydrographic surveying, Oceanographical data, Motion, Velocity, Periodic variations, Mathematical analysis.

OTS SB-497 $0.10

Office of Technical Services, Dept. of Commerce, Washington, D. C.
OCEANOGRAPHY. July 62, 24p. 371 refs. OTS Selective Bibliography SB-497.
Order from OTS SB-497 $0.10 OTS SB-497

DESCRIPTORS: *Bibliography, *Oceanography.

Lists 371 reports and translations added to the OTS collection up to August 1962. Covers research on marine physics; sound, temperature, and pressure measurements; structure of ocean depressions; underwater photography; marine biology; use of the bathythermograph; arctic drifts; underwater sound; ocean currents; ocean bottom topography and sediments among other subjects.

Zaitsev, G. N.
THE HEAT BALANCE OF THE NORWEGIAN AND GREENLAND SEAS AND FACTORS IN ITS FORMATION 1961 [18]p. (figs. omitted) 9 refs. [DSIR NLL] M. 3557.
Order from OTS or SLA $1.60 62-24700

Trans. of mono. [Sovetskie Rybo Khozyaistvennye Issledovaniya v Moryakh Evropeiskogo Severa] (Soviet Fisheries Investigations in North European Seas) Moscow, 1960, p. 67-80.

DESCRIPTORS: *Norwegian Sea, *Greenland Sea, Ocean currents, *Oceanographical data, Temperature, *Heat, Atmosphere, Turbulence,

Physics of the Atmosphere

Fedorova, N. I.
PHYSICS OF THE UPPER ATMOSPHERE. 5 Nov 62, 8p. JPRS: 16025.
Order from OTS $0.50 62-11795

Trans. of Akademiya Nauk SSSR. Vestnik, 1962 [v. 32] no. 7, p. 112-114.

DESCRIPTORS: *Upper atmosphere, Atmosphere, *Physics, Sky brightness, Night sky, Twilight, Aurorae

Istomin, V. G.
ABSOLUTE CONCENTRATIONS OF IONIC COMPONENTS IN THE EARTH'S ATMOSPHERE AT ALTITUDES OF FROM 100 TO 200 KM. [Nov 62] 4p. 11 refs.
Order from STS $6.25 STS Trans-I-6223

Trans. of Iskusstvennye Sputniki Zemli (USSR) 1962, v. 11, p. 94-98.

DESCRIPTORS: *Space flight, Spaceships, *Rocket research, Atmosphere, High altitude, Electrons, Ions.

Tarasova, T. M.
DIRECT MEASUREMENTS OF THE AIRGLOW IN THE REGION $\lambda = 8640$ A. [Nov 62] 3p.
Order from STS $4.60 STS Trans-T6227

Trans. of Iskusstvennye Sputniki Zemli (USSR) 1962, v. 13, p. 107-109.

DESCRIPTORS: *Satellite vehicle research, Photometers, Spectrographic analysis, *Sky brightness, Oxygen.

ENGINEERING

IMPROVEMENTS IN MAGNETIC TAPE. [1962] 8p. 1 ref.
Order from OTS or SLA $1.10 62-16209

Trans. of French patent 1,274,802, P. V. 842,849, internat. cl. C 22c-G 06k-H ol d, by International Computers and Tabulators Ltd., appl. 3 Nov 60, granted by law of 18 Sep 61 (pat. appl: Gt. Brit. 6 Nov 59 under no. 37,697/59, in name of applicant) (Bulletin Officiel de la Propriete Industrielle (France) 1961, no. 43).

DESCRIPTORS: *Magnetic tape, Magnetostriction, *Cobalt alloys, Iron alloys, Nickel alloys, *Vapor plating.

IMPROVEMENTS IN WEIGHING APPARATUS. [1962] 18p.
Order from K-H $22.50 K-H 3366-a

Trans. of French patent 779,493 [1935].

DESCRIPTORS: *Balances, Weighing, Instrumentation.

SERIAL CONSTRUCTION TO PREVENT INTERFERENCE IN WORK BETWEEN TWO OR MORE APPARATUSES. [1962] 16p.
Order from K-H $20.00 K-H 3470

Trans. of Swedish patent 34,187 [1913].

DESCRIPTORS: *Instrumentation, Interference, Construction.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 41. 30 Oct 62 [12]p. JPRS: 15951.
Order from OTS or SLA $1.60 62-33657

Trans. of Avtomatika, Telemekhanika i Svyaz' (USSR) 1962 [v. 6, no. 7] p. 44; and from Pravda Ukrainy (USSR) 1962, no. 134(6153) 9 June, p. 1; Kommunist Tadzhikistana (USSR) 1962, no. 169(9607) 20 July, p. 2.

DESCRIPTORS: *Industrial production, *Precision equipment, *Telephones, *Railroads, *Switches, Industrial plants, *Electrical equipment.

Contents:
Improve the quality of telephone manufacturing, by G. I. Kraev
Difficulties encountered in equipment at the Povorino station of the southeast railroad, by N. A. Litvinov
Eliminate defects of the line battery switch, by K. V. Zhurin
The new firm-"Electron"
Latvian-made electric products
Moderization of the old Riga electromechanical plant, by E. Damberg.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 42. 30 Oct 62 [38]p.
JPRS: 15953.
Order from OTS or SLA $3.60 62-33664

Trans. of Vneshnyaya Torgovlya (USSR) 1962 [v. 42] no. 8, p. 45; Promyshlennaya Energetika (USSR) 1962 [v. 17] no. 6, p. 54; Razvedka i Okhrana Nedr (USSR) 1962 [v. 28] no. 8, p. 62-63; Ogonek (USSR) 1962 [v. 40] no. 9, p. 30-31; no. 25, p. 17-18; and from Pravda, Leningrad (USSR) 1962, 30 June, p. 4; Ekonomicheskaya Gazeta (USSR) 1962 [no. 22(43)] 26 May, p. 35; 28[49] July, p. 6.

DESCRIPTORS: *Industrial production, *Precision equipment, *Medical equipment, Heart, Surgery, *Radio receivers, *Television receivers, Maintenance, Standardization, *Auditory signals, *Geophysical prospecting, Powder metals.

Contents:
New apparatus for heart surgery, by B. Nebesov
Thousands of radios and television sets lack spare parts, by V. Dykin
Moldavian industry increases exports
New audible signaling devices
Creative innovations in geological prospecting honored by 1961 Moscow exposition, by A. M. Grimberg
Cutback in powder metal production at Ivanovo due to state's failure to provide funds
Defective workmanship and shortage of spare parts necessitate frequent TV repairs and premerchandising overhauls, by Ya. Miletskii
Greater centralization required to improve and standardize Soviet TV receivers, by G. Kulikovskaya.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 43. 2 Nov 62 [17]p.
JPRS: 16016.
Order from OTS or SLA $1.60 62-33708

Trans. from Pravda, Moscow (USSR) 1962, 3 Aug, p. 2; Ekonomicheskaya Gazeta (USSR) 1962, no. 32(53) p. 8; no. 33(54) p. 44.

DESCRIPTORS *Industrial production, *Precision equipment, *Clocks, *Quality control, Reliability, Finishes, Instruments

Contents:
Superprecision clock AChF-3
The role of the sovnarkhoz in improving the quality of precision equipment, by E. Klenov and E. Chigvintsev
Poorly finished scientific instruments, by L. Isakov

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 44. 7 Nov 62 [49]p.
JPRS: 16082.
Order from OTS or SLA $4.60 62-33687

Trans. of Kozheveno-Obuvnaya Promyshlennost' (USSR) 1962 [v. 4] no. 7, p. 40-41; Promyshlennaya Energetika (USSR) 1962 [v. 17, no. 9] p. 47-48 and 62; and selected articles from June-Aug 62 issues of 7 Russian newspapers.

DESCRIPTORS: *Industrial production, *Precision equipment, *Refrigeration systems, *Ultrasonic equipment, Sterilizers, Industrial plants, Electron tubes, Leather, *Instrumentation, Manometers, Heating, Control systems, *Semiconductors, Electrometers, Oscellographs, *Compasses, Television receivers, *Telephones, *Telemeter systems, *Voltage regulators, *Tachometers, *Pulse counters, *Oil filters

Contents:
A new refrigerator and a new ultrasonic sterilizer
Production shortcomings at the Moscow electric tube plant, by K. Kotel'nikova and others
New control, measuring and regulating instruments in the leather industry, by V. N. Khodosova and I. Yu. Irger
A visit to the Zhitomir electrical instruments plant, by Al. Sirota
For a more efficient performance of the manometer plant, by P. Lachugin
The Moscow automatic heat controls plant
A new semiconductor counter
Certificate of merit awarded to Armenian mathematical researchers
The Kishinev vibropribor instrument-making plant, by V. Segalov
A new gyro-induction compass for river boats, by A. Adashevskii
Production bottlenecks at the Elektropul't plant, by A. Sharikov
Abuse at Moscow television plant in testing of television sets, by V. Efimov
Telephone without a receiver
Telemetering devices and instruments
Tachometer, voltage-regulator, level-signaling pulse-counting devices and oil filters

Juchniewicz, Romuald.
EXAMINATION OF ANTI-CORROSION ACTION OF ZINC PROTECTORS APPLIED IN OUR SHIPBUILDING INDUSTRY (Badania Antykorozymjmego Dzialania Protektorow Cynkowych Stosowanych w Naszym Okretownichtwie) tr. by Zbigniew L. Pankowicz and Lloyd G. Robbins. July 59 [19]p. 39 refs. STS 301; Bureau of Ships Trans. 678.
Order from OTS or SLA $1.60 60-13229

Trans. of Budownictwo Okretowe (Poland) 1957 v. 3, p. 117-122.

DESCRIPTORS: *Ship hulls, *Corrosion, Marine rudders, Ship plates, Marine propellers, Metal screws, Brass, Bronze, *Corrosion inhibition, *Zinc electrodes, *Anodes, Electrochemistry.

Schwank, Günther.
PROCEDURE AND DEVICES FOR MAKING SURFACES WITH THERMIC RADIATIONS. [1966] 4p. (figs. omitted).
Order from OTS or SLA $1.10 62-16377

Trans. of French patent 853,322, gr. 15, cl. 2, appl. 22 Apr 39, issued 28 Nov 39, pub. 15 Mar 40.

DESCRIPTORS: *Radiant heating panels, *Ovens, *Thermal radiation, Porous filters.

Aeronautical Engineering

HUB FOR ROTOR OF HIGH SPEED HELICOPTER.
Sep 62 (drawings omitted).
Order from INFOSERV $10.00

Trans. (text only) of French patent 1,213,809, by Giravions Dorand, 1959.

DESCRIPTORS: Helicopters, *Helicopter rotors.

IMPROVEMENTS TO ROTATING WING AIRCRAFT.
Sep 62 (drawings omitted).
Order from INFOSERV $10.00

Trans. (text only) of first addition to French patent 892,653, by Société Française du Gyroplane, 1946.

DESCRIPTORS: *Aircraft, Design, Wings, Rotation.

PLANNED Tu-124A BYPASS JET AIRLINER AS A POSSIBLE VERSION OF THE "BLINDER" MEDIUM BOMBER.
27 Apr 62, 2p. 9 refs. AID Rept. 62-57; AD-281 453.
Order from OTS or SLA $1.10 62-25152

A review article compiled from various periodical sources.

DESCRIPTORS: *Jet planes, *Transport planes, *Commercial planes, Design, Jet engines, Operation.

Glushkov, I.
PARACHUTES WITH ROTATING CANOPIES. 7 Aug 62 [12]p. FTD-TT-62-983.
Order from OTS or SLA $1.60 62-32943

Unedited rough draft trans. of Kryl'ya Rodiny (USSR) 1961 [v. 12] no. 12, p. 24-26.

DESCRIPTORS: *Parachutes, Design, Construction, Rotation, Parachute descents.

Khokhlov, A. F.
PRECISION AUTOMATIC EQUIPMENT FOR THE DETERMINATION OF TRUE HEADING AND LATITUDE.
Sep 62 [5]p. 1 ref.
Order from ARS in Its Journal, v. 32, no. 9, $3.00

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Priborostroenie (USSR) 1960, v. 3, no. 5, p. 52-62. Unedited rough draft trans. is available from OTS or SLA $5.60 in 62-15195, FTD-TT-61-42, 13 Nov 61 [51]p.

DESCRIPTORS: Automatic, *Precision equipment, Design, *Compasses, Gyroscopes, *Flight instruments, *Automatic navigators, Navigators.

Tauscher, H. and Fleischer, H.
THE USE OF HIGH STRENGTH STEEL CASTINGS IN AIRCRAFT CONSTRUCTION. Oct 62.
Order from BISI £2 5s BISI-2820

Trans. of Neue Hütte (East Germany) 1961, v. 6 [no. 3] p. 151-156.

DESCRIPTORS: *Steel castings, *Aircraft equipment, Welding, Heat treatment, Tensile properties, Fatigue (Mechanics), Vibration.

Chemical Engineering

NICOTINE-CONTAINING SOLID MASSES. [1962] 2p.
Order from K-H $2.50 K-H 5513-f

Trans. of German patent 510,376 [1930].

DESCRIPTORS: *Nicotine, Molding materials, Solids.

PROCESS FOR OBTAINING PARTICULARLY NICOTINE FROM STEAM VOLATILE ALKALOIDS. [1962] 4p.
Order from K-H $5.00 K-H 3964-c

Trans. of German patent 497,630 [1930].

DESCRIPTORS: *Alkaloids, *Nicotine, Processing, Evaporation, Steam, Distilling plants.

PROCESS FOR OBTAINING STEAM VOLATILE ALKALOIDS. [1962] 4p.
Order from K-H $5.00 K-H 3964-d

Trans. of German patent 500,294 [1930].

DESCRIPTORS: *Alkaloids, Processing, Evaporation, Steam, Distilling plants.

PROCESS FOR OBTAINING STEAM VOLATILE ALKALOIDS. [1962] 6p.
Order from K-H $7.50 K-H 3964-e

Trans. of German patent 500,998 [1930].

DESCRIPTORS: *Alkaloids, Processing, Evaporation, Steam, Distilling plants.

PROCESS FOR REFINING OF ALCOHOL-CONTAINING LIQUIDS AND EQUIPMENT FOR CARRYING OUT THE PROCESS. [1962] 7p.
Order from K-H $8.25 K-H 5044-b

Trans. of German patent 276,400 [1914].

DESCRIPTORS: *Alcohols, Liquids, Processing, Refineries.

PROCESS FOR THE OBTAINING OF VARIOUS ENZYMES, ESPECIALLY OF THE PROTEOLYTIC ENZYMES, SECRETED BY MICROORGANISMS, WITH A VIEW TOWARD THEIR UTILIZATION IN TANNING, SKIN DRESSING, AND OTHER INDUSTRIES. [1962] 10p.
Order from K-H $12.50 K-H 5009-c

Trans. of French patent 670,099 [1929].

DESCRIPTORS: *Enzymes, *Proteases, Production, *Microorganisms, *Leather.

PROCESS FOR THE OBTAINING OF VARIOUS ENZYMES, ESPECIALLY OF THE PROTEOLYTIC ENZYMES, SECRETED BY MICROORGANISMS, WITH A VIEW TOWARD THEIR UTILIZATION IN TANNING, SKIN DRESSING, AND OTHER INDUSTRIES (FIRST ADDITION). [1962] 2p.
Order from K-H $2.50 K-H 3964-a

Trans. of first addition to French patent 670,099 [1929].

DESCRIPTORS: *Enzymes, *Proteases, Production, *Microorganisms, *Leather.

PURIFICATION OF LIQUID AMMONIA EXTRACT OF PLANT MATERIALS. [1962] 4p.
Order from K-H $5.00 K-H 3166-d

Trans. of [published] Japanese patent [27]-126, 1952.

DESCRIPTORS: *Ammonia, Purification.

SOLID, MOLDED, NICOTINE CONTAINING MASSES. [1962] 2p.
Order from K-H $2.50 K-H 5513-d

Trans. of German patent 510,377, class 45/1, group 3, issued 18 Oct 30.

DESCRIPTORS: *Nicotine, Molding materials, Solids.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL INDUSTRY NO. 33. 23 Oct 62 [40]p. JPRS: 15856.
Order from OTS or SLA $3.60 62-33603

Trans. of Khimicheskie Volokna (USSR) 1962, no. 3, p. 2-12.

DESCRIPTORS: *Industrial production, *Chemical industry, *Synthetic fibers, Industrial plants, Economics.

Contents:
For a further acceleration in the development of the chemical fiber industry
The introduction of the new technology and the tasks of the chemical fiber industry, by A. L. Borisov
The main trends of scientific and technical development of the chemical fiber industry in the light of the decisions of the Party Congress (no. 22) by N. V. Mikhailov
The latest technique and technology for plants of the Seven-Year Plan, by S. L. Dich.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL INDUSTRY NO. 35. 30 Oct 62 [35]p. JPRS: 15940.
Order from OTS or SLA $3.60 62-33656

Trans. of 9 selected articles from July-Aug 62 issues of 9 Russian newspapers.

DESCRIPTORS: *Industrial production, *Chemical industry, *Industrial plants, Glass textiles, Tires, *Petroleum industry, Fertilizers, *Plastics, Porous materials, Acetylenes, Synthetic rubber, Urban areas.

Contents:
Glass fiber plant erected on shores of Lake Sevan, by N. Mateiko
Yaroslavl' tire plant produces longservice tire, by A. Vanyashova
About the Sumgait petrochemical combine project
Former Khimprom Artel continues expansion of products output, by B. Annamanedov
Nevinnomyssk chemical combine: a complex of chemical enterprises, by B. Baidakov
Use of poroplast increases production, lowers cost, by B. Metlitskii
Acetylene installation at the Lisichansk combine, by I. Boichenko
First stage of Kuybyshev synthetic caoutchouc plant put into operation
The construction of a new industrial city: Soligorgk, by G. Sinyakovich.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL INDUSTRY NO. 36. 31 Oct 62 [38]p. JPRS: 15974.
Order from OTS or SLA $3.60 62-33653

Trans. from Ekonomicheskaya Gazeta (USSR) 1962, no. 35(56) p. 34; no. 36(57) p. 5-6, 23; Komsomol'skaya Pravda (USSR) 1962, 24 Aug; Turkmenskaya Iskra (USSR) 1962, 12 Aug; Kommunist Tadzhikistana (USSR) 1962, 10 Aug; Sovetskaya Estoniya (USSR) 1962, 10 Aug; Pravda, Moscow (USSR) 1962, 10 Aug, 28 Aug, 29 Aug.

DESCRIPTORS: *Industrial production, *Chemical industry, *Industrial plants, Construction, Synthetic rubber, Sulfur, *Textiles, Rock, *Agriculture, Costs, *Algae, Scientific research.

Contents:
Lagging construction of the Kuybyshev synthetic rubber plant
Gaurdak sulfur concentration mill, by V. Borisov
Yarn from stone, by M. Kulidzhanyan
Each plant on a non-subsidy basis, by Kh. Peremees
Trends in the chemization of agriculture, by B. Levishchev
The origin of discrepancies in production at the Moscow "Kauchuk" plant, by I. Manvelov
No responsibility for poor management, by V. Yakhnevich
High production costs at the Kalininskii artificial fiber combine, by A. Komkov
Reduction of production cost at the Ufa chemical plant,

by A. Boguslavskii
Agar from Baltic seaweed, by P. Baikov
Organization of public scientific research institutes at industrial enterprises, by A. Goncharik and V. Kondrashov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL MACHINE BUILDING NO. 10. 9 Nov 62 [24]p.
JPRS: 16123.
Order from OTS or SLA $2.60 63-13088

Trans. from Izvestiya (USSR) 1962, 6 July, p. 3 and 27 July, p. 3.

DESCRIPTORS: *Industrial production, *Chemical industry, Industrial plants, Economics, Machines.

Contents:
Problems stemming from the broad products list of the Sumy machine building plant imeni Frunze, by P. Belikov
Further production problems at the Sumy machine building plant imeni Frunze, by A. Druzenko and others
Production problems at the Sumy plant imeni Frunze, by V. Krivoskeev and N. Ter-Minasova.

Bauer, R. and Eisen, J.
INDUSTRIAL EXPERIENCE WITH A PHOTO-ELECTRIC COLORIMETER OF DR. B. LANGE. [1962] 6p. (fig. refs. omitted).
Order from SLA $1.10 62-16924

Trans. of Metall (West Germany) 1949, v. 3, June, p. 187-192.

DESCRIPTORS: *Industrial equipment, *Colorimetric analysis, *Photoelectric cells, Test equipment.

Beilin, M. I.
CERTAIN ASPECTS OF THE HYDRODYNAMICS OF FLUIDIZED BEDS. Nov 62 [4]p. 5 refs.
Order from ARS in Its Journal, v. 32, no. 11, $3.00

Trans. of Khimiya i Tekhnologiya Topliv i Masel (USSR) 1961 [v. 6] no. 4, p. 19-23.

DESCRIPTORS: *Fluidized solids, *Hydrodynamics, Velocity, Reynolds number, Mathematical analysis, Coal.

Berge, H. and Kirchner, W.
OVEN OPERATION AND AROMATICS CONTENT. Oct 62.
Order from BISI f 2 15s BISI-2950

Trans. of [GWF; das] Gas- und Wasserfach (West Germany) 1961, v. 102, 24 Nov, p. 1288-1290.

DESCRIPTORS: *Ovens, Gases, *Hydrocarbons, Production, Naphthalenes.

Gillet, A. and Urlings, J.
COMPARATIVE PYROLYSIS OF WOOD, CELLULOSE, LIGNIN AND COALS (CONTINUATION). [1962] 2p.
Order from K-H $2.50 K-H 12083-c

Trans. of Chimie et Industrie (France) 1953, v. 70, no. 1, p. 64.

DESCRIPTORS: *Wood, *Cellulose, *Lignin, *Coal, Pyrolysis.

Gillet, A. and Urlings, J.
COMPARATIVE PYROLYSIS OF WOOD, CELLULOSE, LIGNIN AND COALS: FROM WOOD TO COALS. [1962] 13p.
Order from K-H $16.25 K-H 12083-b

Trans. of Chimie et Industrie (France) 1952, v. 68, p. 55-60.

DESCRIPTORS: *Wood, *Coal, Pyrolysis, Cellulose, Lignin.

Gillet, A. and Urlings, J.
COMPARATIVE PYROLYSIS OF WOOD, CELLULOSE, LIGNIN AND COALS: SYSTEMATIC GRADUATED PYROLYSIS OF WOOD. [1962] 26p.
Order from K-H $32.50 K-H 12083-a

Trans. of Chimie et Industrie (France) 1952, v. 67, no. 6, p. 909-919.

DESCRIPTORS: *Wood, Pyrolysis, Cellulose, Lignin, Coal.

Gudkov, S. F. and Fedulova, V. P.
PROCESS FOR THE PRODUCTION OF FORMALDEHYDE. [1962] 2p.
Order from ATS $5.00 ATS-27P62R

Trans. of Soviet certificate of authorship 112, 633, filed 22 July 57 under no. 580, 963.

DESCRIPTORS: *Formaldehyde, Production.

Hashimoto, Hidehisa and Ito, Mikio.
A RECORDING MICRO THERMOBALANCE. Rept. 7 of Study on the Thermal Degradation of Solid. Oct 62, 26p. 7 refs.
Order from SA $28.00 SA Code-G572

Trans. in manuscript of Kogyo Kagaku Zasshi (Japan) 1961, v. 64, no. 9, p. 1515-1518.

DESCRIPTORS: *Laboratory equipment, *Recording systems, *Torsion balances, Tungsten wire, Pyrolysis, Solids.

Knunyants, I. L., German, L. S. and others.
A METHOD FOR THE PREPARATION OF α-FLURO-α-CHLORO-β-HYDROXY-PROPIONIC ACID. [1962] 2p.
Order from ATS $3.00 ATS-40P63R

Trans. of Soviet certificate of authorship 128, 460, filed 27 Oct 59 under no. 642, 345/23.

DESCRIPTORS: Fluorine compounds, Chlorine compounds, Hydroxides, *Propionic acids, Preparation.

Koch, Wilhelm and Guthke, Friedrich Wilhelm.
PROCESS FOR THE PRODUCTION OF PURE CONDENSATION PRODUCTS FROM PHENOL AND KETONES. [1962] 5p.
Order from OTS or SLA $1.10 62-16253

Trans. of German patent 604, 406, cl. 12q, gr. 16, I 45574 IVa/12q, by I. G. Farbenindustrie Akt.-Ges., granted 4 Oct 34, pub. 20 Oct 34, pat. 22 Oct 32.

DESCRIPTORS: *Phenols, *Ketones, Condensation, Salts, Production

Kyazimov, A. A., Fedotova, A. F. and others.
PLANT TEST OF ROTATING-DISK CONTACTOR. [1962] 5p.
Order from ATS $6.75 ATS-56P63R

Trans. of Khim[iya] i Tekhnol[ogiya] Topliv i Masel (USSR) 1962, v. 7, no. 5, p. 10-13.

DESCRIPTORS: *Bodies of revolution, Disks, Motor starters, Tests.

Lulova, N. I., Piguzova, L. I. and others.
STUDY OF MOLECULAR-SIEVE-TYPE ADSORBENTS WITH THE AID OF GAS CHROMATOGRAPHY. [1962] 5p.
Order from ATS $7.00 ATS-27P63R

Trans. of Khim[iya] i Tekhnol[ogiya] Topliv i Masel (USSR) 1962, v. 7, no. 5, p. 70-73.

DESCRIPTORS: *Adsorbents, *Gas chromatography.

Molokanov, Yu. K.
HYDRAULIC RESISTANCE OF GRID AND PERFORATED TRAYS OF THE DOWNFALL TYPE. [1962] 7p.
Order from ATS $9.85 ATS-50P63R

Trans. of Khim[icheskaya] Prom[yshlennost'] (USSR) 1962, no. 4, p. 291-294.

DESCRIPTORS: *Conveyors, Hydraulic research, Resistance, Porosity.

Nadziakiewicz, J.
PROBLEMS IN THE PROCESSING OF COKE (Problematyka Proceau Koksowania). [1959] [51]p. 20 refs.
Order from OTS or SLA $5.60 59-18366

Trans. of Glowny Instytut Gornictwa. Komunikat (Poland) 1954, no. 162, ser. B. Wydawnictwo Gorniczo-Hutnicze, 20p.

DESCRIPTORS: *Coke, Processing, Mechanical properties, Plasticity, Coal.

An analysis of the notion of mechanical strength of coke and of factors inherent in the coke itself which are conditioning the different strength of various cokes was carried out. Analysis was also carried out of volumetric changes occurring during the coking process at the transformation of coal into coke as causes of cracking of coke. Taking into account the conclusions resulting from our considerations, the mechanism of the course of phenomena occurring in the process of carbonizing the coal in coking chambers is given. (Author)

Pil'skiy, I. Ya.
NEW METHOD OF INCREASING COKE-OVEN PRODUCTION. Jan/Feb 61, 1600 words.
Order from HB $4.60 HB-4782

Trans. of #Koks i Khimiya (USSR) 1959, v. 28, no. 5, p. 29-31 [sic].

DESCRIPTORS: *Coke, Production, Tests.

Pis'men, L. M. and Ioffe, I. I.
CALCULATION OF THE OPTIMUM CONDITIONS FOR CHEMICAL REACTORS BY THE DYNAMIC PROGRAMMING METHOD. [1962] 14p.
Order from ATS $19.25 ATS-45P63R

Trans. of Khim[icheskaya] Prom[yshlennost'] (USSR) 1962, no. 4, p. 260-266.

DESCRIPTORS: Reactors, *Towers (Chemistry) *Programming, Dynamics.

Slosar, J., Petranek, J. and others.
A METHOD OF PRODUCTION OF BENZENEDICARBOXYLIC ACIDS BY THE OXIDATION OF POLYALKYLBENZENES BY OXYGEN IN A MONOCARBOXYLIC ACID MEDIUM. [1962] 4p.
Order from ATS $8.75 ATS-79P62C

Trans. of Czechoslovakian patent 97,559, filed 20 July 59, valid from 20 July 59.

DESCRIPTORS: *Carboxylic acids, Production, Alkyl radicals, *Benzenes, Oxidation.

Sumarokov, V. P.
FUNDAMENTAL ADVANCES IN THE STUDY OF THE COMPOSITION AND UTILIZATION OF TARS FROM THE PYROLYSIS AND GASIFICATION OF WOOD. [1962] 11p.
Order from K-H $13.75 K-H 12119-b

Trans. of Gidroliz[naya] i Lesokhim[icheskaya] Prom[yshlennost'] (USSR) 1957, v. 10, no. 7, p. 21-24.

DESCRIPTORS: *Wood, Pyrolysis, Coal tars.

Civil Engineering

BUILDING CONSTRUCTION ON PERMAFROST IN THE USSR, REPT. NO. 98. Review of Soviet Literature. Apr 59 [195]p.
Order from OTS or SLA $3.00 61-27853

DESCRIPTORS: *Civil engineering, Engineering, Buildings, Structures, Construction, Geophysics, *Permafrost, Geology, Deformation, Industrial plants, Construction materials industry, Climatic factors.

Contents:
Vorkuta, its location and structural development
Physical characteristics of the Vorkuta region
Stable structures at Vorkuta
Deformation of Vorkuta buildings and its causes
Prevention of building deformation at Vorkuta
Dudinka its wooden buildings
Igarka, effect of its physical characteristics on buildings
Brick manufacturing plant (at or near Noril'sk)
Noril'sk, structural evolution
Yakutsk, its structural development
Large-pore (Sandless) concrete as wall construction material in the arctic (Tiksi)
Foundation design; gold ore concentration plant Transbaikal region)
Kolyma region, construction trend (1957)
Anadyr', deformation of buildings (1937)

Jamm, W.
STRUCTURAL DESIGN WITH TUBES AND RECTANGULAR HOLLOW SECTIONS. Oct 62.
Order from BISI £4 10s BISI-2920

Trans. from Blech (West Germany) 1962 [v. 9] Jan, suppl. "Rohre und Profile".

DESCRIPTORS: *Pipes, Buckling, *Structures, *Construction, *Construction materials industry.

Send, Alfred, Gelsdorf, Gunter, and Kaiser, Herbert
SUITABILITY OF BLAST FURNACE SLAG AS BITUMINOUS AGGREGATE FOR ROAD BUILDING (WITH DISCUSSION). [1960] [18]p. 6 refs.
Order from SLA $1.60 62-16872

Trans. of Stahl u[nd] Eisen (West Germany) 1960, v. 80, no. 5, p. 290-296 ([Verein Deutscher Eisenhüttenleute (West Germany). Berichte]-64).
Another trans. is available from BISI £5 as BISI-1679 [1960].

DESCRIPTORS: *Slags, *Bituminous surfacing, Materials, Roads, Surfaces.

Sokolovskii, V. V.
STATICS OF SOIL MEDIA, tr. by D. H. Jones and A. N. Schofield. 1960, 260p.
Order from Butterworth Inc., 7235 Wisconsin Ave. Washington, 14, D. C. $10.50

Trans. of mono. [Statika Sypuchei Sredy, Moscow, [1954].

DESCRIPTORS: *Soils, *Statics, Plasticity, Mathematical analysis, Foundations (Structures), Levers.

Steinhardt, Otto.
PRESTRESSED SCREWS IN STEEL CONSTRUCTION. [1960] [15]p. 4 refs.
Order from SLA $1.10 62-16850

Trans. of V[erein] D[eutscher] I[ngenieure]. Zeitschrift (West Germany) 1959, v. 101, no. 19, p. 769-773.
Another trans. is available from BISI £4 as BISI-1720 [1960].

DESCRIPTORS: *Metal screws, Mechanical properties, *Joints, Friction, *Steel, Construction materials industry, Structures, Costs, Stresses.

Vyalov, S. S.
CREEP AND FATIGUE STRENGTH OF FROZEN SOILS, tr. by Lionel Mote. [1962] [10]p. 8 refs. TRC Trans. no. 1064; [DSIR] NLL M. 6008.
Order from OTS or SLA $1.10 62-25919

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1955, v. 104, no. 6, p. 850-853.
Another Trans. is available from NRCC as NRCC C-2365.

DESCRIPTORS: *Soils, Minerals, Particles, Ice, Water, Freezing, Density, Rock, Geology, Melting, *Creep, *Fatigue (Mechanics), Mechanical properties, Stresses. Deformation.

Electrical and Electronic Engineering

ALLOYING OF SEMICONDUCTOR DEVICE CHARACTERIZED BY ALUMINUM TREATMENT. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-16913, 19 Oct 62, by the Bendix Corp.

DESCRIPTORS: *Semiconductors, *Aluminum, Alloys.

ALL POLAND WITHIN REACH OF TV STATIONS. 2 Aug 60 [5]p. USASIA: H-6816a; JPRS: R-1042-D.
Order from OTS or SLA $1.10 60-31516

Trans. of Lacznosc (Poland) 1959 [v. 10] no. 4, p. 2.

DESCRIPTORS: *Communication systems, *Television stations, Distribution, *Poland.

APPARATUS FOR ALLOYING FLAT ELECTRODES TO SEMICONDUCTOR. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-16070, 9 Oct 62, by Siemens Schertwerke Aktiengesellschaft.

DESCRIPTORS: *Semiconductors, *Electrodes, Configuration, Alloys, Manufacturing methods.

AUTOMATIC OPERATION FOR ZEVENBERGEN SECTOR. 19 Oct 60 [3]p. USASIA: H-673b; JPRS: R-1203-D
Order from OTS or SLA $1.10 60-31863

Trans. of PTT Bedrijfsbanden (Netherlands) 1958, v. 19 no. 10, p. 307.

DESCRIPTORS: Automatic, *Telephone communication systems, Telephones, Operation, *Netherlands, *Communication systems.

BASE STABILIZING CIRCUIT FOR PHOTO TRANSISTOR. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-16640, 16 Oct 62, by Tokyo Kohku Keiki K.K.

DESCRIPTORS: *Transistors, Photoelectric materials, Stabilization systems, Circuits.

BIOGRAPHIC DATA ON CZECHOSLOVAK ELECTRICA ENGINEERING SPECIALISTS. 7 Sep 62 [14]p. JPRS: 15155.
Order from OTS or SLA $1.60 62-32884

Trans. of Elektrotechnicky Obzor (Czechoslovakia) 1962, v. 51, no. 6, p. 258-260 and Elektrotechnicky Casopis (Czechoslovakia) 1962, v. 13, no. 7, p. 455-456.

DESCRIPTORS: Personnel, *Engineering personnel, Electrical engineering, Czechoslovakia

Contents:
The 85th birthday of Prof. Vladimir List, by Jan Osolsobe
Prof. Engr. Ladislav Reiss celebrates his 60th birthday.

COMMUNICATIONS, TRANSPORTATION, NAVIGATION, ELECTRICAL AND ELECTRONIC EQUIPMENT, SYSTEMS AND DEVICES, INCLUDING AIRCRAFT AND MISSILE EQUIPMENT, NO. 4 p. 111-134
Series 5 of English Abstracts of Selected Articles from Soviet Bloc and Mainland China Technical Journals. May 61, [24]p.
Order from OTS $9.00/6 issues 61-11144-4
Foreign $11.25/6 issues

DESCRIPTORS: Scientific reports, *Communication systems, *Transportation, *Electrical equipment, *Electronic equipment, *Aircraft, *Guided missles, *China, Navigation, Abstracts, *China.

Consists of abstracts in English.

COMPOUND TYPE TRANSISTOR CONSTRUCTION USING RESIN MOULDING. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese utility model 37-28610, 23 Oct 62, by Tokyo Shibaura Electric Co., Ltd.

DESCRIPTORS: *Transistors, Design, Resins, *Molding, Molding materials.

CONTINUOUS PROCESS FOR MANUFACTURING SEMICONDUCTOR DEVICES. Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-13018, 5 Sep 62, by Westinghouse Electric Corp.

DESCRIPTORS: *Semiconductors, Manufacturing methods.

DAMAGE IN THE ETHER. 1 Aug 60 [4]p. USASIA: H-6819; JPRS: R-1010-D.
Order from OTS or SLA $1.10 60-31492

Trans. of Lacznosc (Poland) 1959 [v. 10] no. 16, p. 2.

DESCRIPTORS: *Communication systems, *Radio transmission, Atmospherics, Solar disturbances, *Poland.

DECREE ON THE ESTABLISHMENT OF A SECTION FOR THE CONSTRUCTION OF DIRECTIONAL RADIO-TELEPHONE-TELEGRAPH ULTRASHORT WAVE COMMUNICATIONS ON THE BELGRADE-NIS-SKOPJE RELAY LINK. 7 July 60 [5]p. USASIA: SC-257a/60; JPRS: R-838-D.
Order from OTS or SLA $1.10 60-31325

Trans. of PTT Vesnik (Yugoslavia) 1959 [v. 67] no. 22/23, p. 255-256.

DESCRIPTORS: *Communication systems, Radiotelephones, *Telegraph systems, Construction, *Yugoslavia.

FIELD-EFFECT TRANSISTOR DESIGNED FOR HIGH DRAIN CURRENT SATURATION. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-16061, 9 Oct 62, by Nippon Telegraph and Telephone Public Corp.

DESCRIPTORS: *Transistors, *Field wire communication systems, Design, Electric currents.

FIELD-EFFECT TRANSISTOR FOR BISTABLE CIRCUIT APPLICATION. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-16062, 9 Oct 62, by Nippon Telegraph and Telephone Public Corp.

DESCRIPTORS: *Transistors, *Field wire communication systems, *Electronic circuits.

FIELD-EFFECT TRANSISTOR FOR DECIMAL COUNTER APPLICATION. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-16064, 9 Oct 62, by Nippon Telegraph and Telephone Public Corp.

DESCRIPTORS: *Transistors, *Field wire communication systems, Counting methods.

FROM EVERYWHERE IN BRIEF: FROM POLAND. 1 Aug 60 [3]p. USASIA: H-6827; JPRS: R-1015-D.
Order from OTS or SLA $1.10 60-31497

Trans. of Lacznosc (Poland) 1960 [v. 11] no. 12, p. 5.

DESCRIPTORS: *Communication systems, *Poland, *Television transmitters, Personnel.

IMPROVEMENTS IN MESA TYPE TRANSISTOR. Nov. 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-16068, 9 Oct 62, by Radio Corp. of America.

DESCRIPTORS: *Transistors, Design.

IMPURITY-TYPE SEMICONDUCTOR ELEMENT (PNIP OR NPIP). Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-16906, 19 Oct 62, by Semiconductor Research Promotion Association.

DESCRIPTORS: *Semiconductors, Impurities.

INTERNATIONAL CONGRESS ON AUTOMATION, MOSCOW, 27 JUNE-7 JULY 60. 6 Nov 62 [241]p. JPRS: 16043.
Order from OTS or SLA $15.50 62-33723

Trans. of mono. Trudy Pervogo Mezhdunarodnogo Kongressa Mezhdunarodnoi Federatsii po Avtomaticheskomu Upravlenyu (International Congress of the International Federation on Automatic Control (no. 1) Moscow, 1961.

DESCRIPTORS: *Conferences, *Automation, Control, *Control systems, Harmonic analysis, Functions, Linear systems, Nonlinear systems, Statics, Transmission, Multiplex transmission, Frequency, Stability, Circuits, Errors, Corrections, Perturbation theory, Applied mathematics, Design, Synthesis.

Contents:
The theory of harmonically functioning control systems with many control parameters, by Tu Xu Yen
Some possibilities of controlling systems with variable parameters, by J. Marshik
Static analysis of the nonlinear systems containing elements with two inputs, by A. Macura
The theory of invariability of automatically regulated and controlled systems, by V. S. Kulebakin
The application of the equivalent transmission function to the design of following systems for combined control by the method of logarithmic frequency characteristics, by V. A. Besekerskii and S. M. Fedorov
Special structural features of the systems with multiplex control, by M. V. Meerov
Additional information on the report of M. V. Meerov, by V. T. Morozovskii
The principle of invariance and the conditions of its employment in the computation of linear and nonlinear systems, by B. N. Petrov
Supplementary communications concerning the articles of V. S. Kulebakin and B. N. Petrov.

INTERNATIONAL POSTAL-TELEPHONE-TELEGRAPH SERVICE: TELEPHOTOGRAPHIC COMMUNICATIONS BETWEEN YUGOSLAVIA AND CANADA. 1 July 60 [3]p. USASIA SC-256/60; JPRS: R-851-D.
Order from OTS or SLA $1.10 60-31321

Trans. of PTT Vesnik (Yugoslavia) 1959 [v. 67] no. 16, p. 192.

DESCRIPTORS: *Communication systems, *Telegraph systems, Costs, *Yugoslavia, Canada.

JUNCTION TRANSISTOR CONSTRUCTION (PNP, NPN, PNIP, PNPN AND NPNP). Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese utility model 37-28612, 23 Oct 62, by Texas Instruments, Inc.

DESCRIPTORS: *Transistors, Design, *Junction boxes, Model tests.

JUNCTION TRANSISTOR CONSTRUCTION CONDUCIVE TO HIGH GAIN. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-16060, 9 Oct 62, by Clevite Corp.

DESCRIPTORS: *Transistors, *Junction boxes, Design, Automatic volume control.

MAGNETIC FIELD MEASUREMENT USING HALL VOLTAGE AT SEMICONDUCTOR P-N JUNCTION. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-16648, 16 Oct 62, by Director of Industry Technology and Science Agency.

DESCRIPTORS: *Magnetic fields, Measurement, *Hall effect, *Semiconductors.

METHOD OF ALLOYING SEMICONDUCTOR DEVICES. Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-13017, 5 Sep 62, by Fuji Denki Seizo K. K.

DESCRIPTORS: *Semiconductors, Alloys.

METHOD OF ASSEMBLING SEMICONDUCTOR DEVICES. Sep 62.
Order from WBI $2.00

Trans. of mainclaims, including drawings, of published Japanese patent 37-12610, 1 Sep 62, by Clevite corporation.

DESCRIPTORS: *Semiconductors, Manufacturing methods.

METHOD OF BONDING METALLIC LAYER TO SEMICONDUCTOR. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-16069, 9 Oct 62, by Westinghouse Electric Corp.

DESCRIPTORS: *Semiconductors, *Bonding, *Metals, Adhesion.

METHOD OF CLAMPING SEMICONDUCTOR ELECTRODES. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-17723, 30 Oct 62, by Tokyo Shibaura Electric Co. Ltd.

DESCRIPTORS: *Electrodes, *Semiconductors, *Clamps.

METHOD OF FABRICATING P-N JUNCTION. Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-12607, 1 Sep 62, by Hitachi Ltd.

DESCRIPTORS: *Semiconductors, Manufacturing methods.

METHOD OF FABRICATING SEMICONDUCTOR SWITCH ARRAYS. Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-14761, 21 Sep 62, by Shockley Transistor Corp.

DESCRIPTORS: *Semiconductors, *Switches, Manufacturing methods.

METHOD OF MAKING SEMICONDUCTOR ELECTRODE CONNECTIONS. Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-13918, 13 Sep 62, by Siemens Skertowerke A. G.

DESCRIPTORS: *Semiconductors, *Electrodes, Electric connectors, Manufacturing methods.

METHOD OF MAKING SEMICONDUCTOR OR OTHER ELECTRICAL CONTACTS HAVING AT LEAST TWO CLOSELY ARRANGED PLANES. Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-13916, 13 Sep 62, by Siemens und Halske A. G. (West Germany).

DESCRIPTORS: *Semiconductors, *Electric connectors, Manufacturing methods.

METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE (IMPROVED P-N JUNCTION ALLOYING METHOD). Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-13914, 13 Sep 62, by Bendix Corp.

DESCRIPTORS: *Semiconductors, Alloys, Manufacturing methods.

METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE (IMPROVEMENTS IN ESAKI-DIODE). Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-14770, 21 Sep 62, by International Business Machines Corp.

DESCRIPTORS: *Semiconductors, *Diodes, Manufacturing methods.

METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE (OHMIC CONTACT FORMATION BY DESTROYING P-N JUNCTION). Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-13920, 13 Sep 62, by Telefunken Gesellschaft mith Beschrenkter Haftung.

DESCRIPTORS: *Semiconductors, Manufacturing methods.

METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE (P-N JUNCTION WITH PRECISE DIMENSIONS). Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-13020, 5 Sep 62, by International Business Machines Corp.

DESCRIPTORS: *Semiconductors, Manufacturing methods.

METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE (USING A PROTECTIVE LAYER AT P-N JUNCTION). Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-13919, 13 Sep 62, by Siemens Skertowerke A. G.

DESCRIPTORS: *Semiconductors, Manufacturing methods, Protective coverings.

METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE (USING AMMONIUM ATMOSPHERE). Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-14767, 21 Sep 62, by Siemens Skertowerke A. G.

DESCRIPTORS: *Semiconductors, Manufacturing methods, *Ammonium radicals, Atmosphere.

METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE FOR HIGH-FREQUENCY RECTIFICATION. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-17725, 30 Oct 62, by Hitachi, Ltd.

DESCRIPTORS: *Semiconductors, Manufacturing methods, *Rectifiers, *High frequency.

METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE HAVING MINIMUM TEMPERATURE VARIATION. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-16067, 9 Oct 62, by Nippon Telegraph and Telephone Public Corp.

DESCRIPTORS: *Semiconductors, Production, Temperature, Periodic variations.

METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE USING MATERIALS OF DIFFERENT THERMAL EXPANSION COEFFICIENT. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-16916, 19 Oct 62, by Siemens Schertwerke Aktiengesellschaft.

DESCRIPTORS: *Semiconductors, Manufacturing methods, Materials, *Thermal expansion.

METHOD OF MANUFACTURING SEMICONDUCTOR ELEMENT CHARACTERIZED BY CONTROLLING JUNCTION CONFIGURATION AND AREA. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-16914, 19 Oct 62, by Nippon Telegraph and Telephone Public Corp.

DESCRIPTORS: *Semiconductors, Manufacturing methods, Control.

METHOD OF MANUFACTURING SILICON SEMICONDUCTOR DEVICE. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-16059, 9 Oct 52, by Siemens Schertwerke Aktiengesellschaft.

DESCRIPTORS: *Semiconductors, *Silicon, Manufacturing methods.

METHOD OF MOUNTING SEMICONDUCTOR DEVICES. Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-12611, 1 Sep 62, by Radio Corporation of America.

DESCRIPTORS: *Semiconductors, Mounting brackets.

METHOD OF MANUFACTURING SEMICONDUCTOR SIGNAL CONVERTER. Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-13911, 13 Sep 62, by Nippon Electric Co., Ltd.

DESCRIPTORS: *Semiconductors, Signals, Manufacturing methods.

METHOD OF MANUFACTURING SEMICONDUCTOR SIGNAL CONVERTER. Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-13912, 13 Sep 62, by Nippon Electric Co. Ltd.

DESCRIPTORS: *Semiconductors, Signals, Manufacturing methods.

METHOD OF PRE-TREATING SEMICONDUCTOR ELEMENTS. Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-14762, 21 Sep 62, by Japax Co. Ltd.

DESCRIPTORS: *Semiconductors, Manufacturing method

METHOD OF SEALING GLASS CAPSULE FOR DIODE STRUCTURE. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-16915, 19 Oct 62, by Texas Instruments, Inc.

DESCRIPTORS: *Diodes, *Glass seals, Containers, *Encapsulation.

MULTI-INPUT FIELD-EFFECT TRANSISTOR. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-16063, 9 Oct 62, by Nippon Telegraph and Telephone Public Corp.

DESCRIPTORS: *Transistors, *Field wire communication systems, Multiple operation, Electronic equipment.

NEW TELEVISION STATION. 2 Aug 60 [5]p. USASIA: H-6806; JPRS: R-1029-D.
Order from OTS or SLA $1.10 60-31503

Trans. of Lacznosc (Poland) 1958 [v. 9] no. 7, p. 3.

DESCRIPTORS: *Communication systems, *Television stations, *Poland.

NON-BALANCED INPUT TRANSISTOR PUSH-PULL AMPLIFIER WITHOUT USE OF COUPLING CONDENSER. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese utility model 37-27341, 10 Oct 62, by Hitachi, Ltd.

DESCRIPTORS: *Transistors, *Push-pull amplifiers, Electronic equipment, Amplifiers.

ORGANIZATION OF THE TELECOMMUNICATIONS SERVICE BY WESTERN NEIGHBORS. 2 Aug 60 [5]p. USASIA: H-6821c; JPRS: R-1055-D.
Order from OTS or SLA $1.10 60-31529

Trans. of Lacznosc (Poland) 1959 [v. 10] no. 51/52, p. 7.

DESCRIPTORS: *Communication systems, *Telephone communication systems, *Europe.

OSCILLOSCOPIC DETERMINATION OF TRANSISTOR HIGH FREQUENCY CHARACTERISTICS. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-17719, 30 Oct 62, by Telefunken Gesellschaft mith Beschrenkter Haftung.

DESCRIPTORS: *Transistors, *High frequency, *Oscilloscope probes, Oscilloscopes, Oscilloscope screens.

PACKING FOR SEMICONDUCTOR ELEMENTS USING CORRUGATED CARDBOARD. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese utility model 37-27356, 10 Oct 62, by Hitachi, Ltd.

DESCRIPTORS: *Semiconductors, Packaging, Materials, Paper.

POINT-CONTACT DIODE CONSTRUCTION USING GLASS ENCLOSURE TO PROVIDE FOR MECHANICAL AND ELECTRICAL STABILITY. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese utility model 37-27358, 10 Oct 62, by Nippon Electric Co., Ltd.

DESCRIPTORS: *Sliding contacts, *Diodes, *Glass, *Encapsulation, Mechanical properties, Electrical properties, Stability, Design.

POTENTIAL DIVIDER USING TRANSISTORS. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-16602, 16 Oct 62, by Fuji Tsushinki Seizo K.K.

DESCRIPTORS: *Voltage dividers, *Transistors.

POWER TRANSMISSION. [1962] 4p.
Order from K-H $5.00 K-H 3096

Trans. of Swedish patent 45, 871, n.d.

DESCRIPTORS: *Transmissions, Power.

PROBLEMS OF TELEGRAPHIC COMMUNICATIONS. 7 Nov 58 [8]p. JPRS(NY)-L-453.
Order from OTS or SLA $1.10 59-11032

Trans. of Gospodarka Lacznosci (Poland) 1958, no. 3, p. 9-11.

DESCRIPTORS: *Communication systems, *Telegraph systems, Conferences, *Poland.

The present state of telegraphy in Poland is characterized by neglect in the quantitative and qualitative sense. This pertains to both the public network systems and the individual Ministry systems. The principal requirement for remedying this situation is to struggle against the hitherto widespread underestimation of the importance of telegraphy and of its possibilities in modern telecommunications. (Author)

PROCESS FOR INTRODUCING ACTIVE IMPURITIES BY DIFFUSION INTO SEMICONDUCTOR. Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-14763, 21 Sep 62, by Hitachi, Ltd.

DESCRIPTORS: *Semiconductors, Impurities, Diffusion.

PROCESS FOR JOINING SEMICONDUCTOR ELEMENT (SILICON) TO GOLD-PLATED HEAD. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-16917, 19 Oct 62, by Western Electric Co. Inc.

DESCRIPTORS: *Semiconductors, *Silicon, Manufacturing methods, *Gold.

PROCESS FOR MANUFACTURING SEMICONDUCTOR DEVICE USING ALUMINUM ACTIVATING SOLDER. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-17722, 30 Oct 62, by Tokyo Shibaura Electric Co., Ltd.

DESCRIPTORS: *Semiconductors, *Aluminum, *Soldering, Catalysts.

PROCESS FOR MANUFACTURING SEMICONDUCTOR SWITCHING ELEMENTS. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-15867, 6 Oct 62, by Hitachi, Ltd.

DESCRIPTORS: *Semiconductors, Manufacturing methods, *Switches, *Switching circuits.

REPORT OF RADIO, TELEPHONE, AND TELEGRAPH ACTIVITIES IN DENMARK: [EXCERPTS]. 28 Oct 60 [56]p. JPRS: R-1223-D; USASIA: H-6715.
Order from OTS or SLA $5.60 60-31886

Trans. of mono. (financial rept. 1958-59) of the Post and Telegraph Administration of Denmark, Copenhagen, 1959, p. 12-23, 26-30, 50-61, 92-100.

DESCRIPTORS: *Communication systems, *Radio communication systems, *Telegraph systems, *Telephone communication systems, *Denmark, Costs, Construction, Materials.

SEMICONDUCTOR CONSTRUCTION HAVING A SINTERED FOIL BETWEEN SEMICONDUCTIVE MATERIAL AND SUPPORT MEMBER. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-17727, 30 Oct 62, by Siemens Schertwerke Aktiengesellschaft.

DESCRIPTORS: *Semiconductors, Design, *Foils, Sintering, Materials, Mounting brackets.

SEMICONDUCTOR DEVICE (ADVANCED SOLDERING TECHNIQUE). Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of utility model publication no. 37-23316, 7 Sep 62, by Hitachi Ltd.

DESCRIPTORS: *Semiconductors, Soldering.

SEMICONDUCTOR DEVICE (DETAILED ILLUSTRATIONS OF JUNCTION DIODE AND TRANSISTOR CONSTRUCTION) Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-12608, 1 Sep 62, by Shockley Transistor Corporation.

DESCRIPTORS: *Semiconductors, *Transistors, Construction, Diodes.

SEMICONDUCTOR DEVICE (HAVING A HIGH CUT-OFF FREQUENCY, USED FOR CLIPPING AND SWITCHING). Sep 62
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-14759, 21 Sep 62, by Nippon Telegraph and Telephone Public Corp.

DESCRIPTORS: *Semiconductors, *Clipper circuits, *Switches, Frequency.

SEMICONDUCTOR DEVICE (JUNCTION TRANSISTOR AMPLIFIER). Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-12606, 1 Sep 62, by Minneapolis-Honeywell Regulator Co.

DESCRIPTORS: *Semiconductors, *Transistor amplifiers, Amplifiers.

SEMICONDUCTOR DEVICE (JUNCTION TYPE) ENCAPSULATING MEANS USING SOFT SOLDER. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-15868, 6 Oct 62, by Siemens Schertwerke Aktiengesellschaft.

DESCRIPTORS: *Semiconductors, Junction boxes, Encapsulation, Soldering.

SEMICONDUCTOR DEVICE (MULTI-PURPOSE TRANSISTOR ARRANGEMENT). Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings. of utility model publication no. 37-23315, 7 Sep 62, by Sony Corp

DESCRIPTORS: *Semiconductors, *Transistors.

SEMICONDUCTOR DEVICE (SIMPLE ALLOYING PROCESS). Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of utility model publication no. 37-23318, 7 Sep 62, by Siemens Skertowerke A. G.

DESCRIPTORS: *Semiconductors, Alloys.

SEMICONDUCTOR DEVICE (UTILIZING HALL-EFFECT). Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-13010, 5 Sep 62, by Siemens und Halske A. G. (West Germany).

DESCRIPTORS: *Semiconductors, *Hall effect.

SEMICONDUCTOR DEVICE AND MANUFACTURE THEREOF (ALLOY BOND FABRICATION). Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-14768, 21 Sep 62, by Hughes Aircraft Co.

DESCRIPTORS: *Semiconductors, *Alloys, Bonding, Manufacturing methods.

SEMICONDUCTOR DEVICE CHARACTERIZED BY THE USE OF ARSENIC-GOLD WHISKER CONTACTS. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-17724, 30 Oct 62, by Hitachi, Ltd.

DESCRIPTORS: *Sliding contacts, *Arsenic, *Gold, *Semiconductors, Materials.

SEMICONDUCTOR DEVICE HAVING NEGATIVE RESISTANCE CHARACTERISTICS. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-16058, 9 Oct 62, by Oki Electric Industry Co., Ltd.

DESCRIPTORS: *Semiconductors, Electrical properties, Resistance, Negative resistance circuits.

SEMICONDUCTOR DEVICE USED FOR HORIZONTAL DEFLECTION IN TV RECEIVER. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-16909, 19 Oct 62, by Sony Corp.

DESCRIPTORS: *Semiconductors, Deflection, *Television receivers.

SEMICONDUCTOR DEVICE USED FOR HORIZONTAL DEFLECTION IN TV RECEIVER. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-16910, 19 Oct 62, by Sony Corp.

DESCRIPTORS: *Semiconductors, Deflection, *Television receivers.

SEMICONDUCTOR DEVICE USED FOR HORIZONTAL DEFLECTION IN TV RECEIVER. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-16911, 19 Oct 62, by Sony Corp.

DESCRIPTORS: *Semiconductors, Deflection, *Television receivers.

SEMICONDUCTOR DEVICE USING MOLYBDENUM. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-16066, 9 Oct 62, by Tokyo Shibaura Electric Co., Ltd.

DESCRIPTORS: *Semiconductors, *Molybdenum.

SEMICONDUCTOR ENCAPSULATION USING GLASS. Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-14760, 21 Sep 62, by Nippon Electric Co., Ltd.

DESCRIPTORS: *Semiconductors, *Glass, *Encapsulatio

SEMICONDUCTOR NON-LINEAR ELEMENT. Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-14758, 21 Sep 62, by Nippon Electric Co., Ltd.

DESCRIPTORS: Semiconductors, Electronic equipment, Nonlinear systems.

SEMICONDUCTOR TREATMENT FOR PRODUCING A LOW RESISTANCE PATH THEREIN. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-17726, 30 Oct 62, by Westinghouse Electric Corp.

DESCRIPTORS: *Semiconductors, Electrical properties, Resistance.

SILICON SEMICONDUCTOR DEVICE HAVING ANTIMONY-GOLD CONTACT. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-16907, 19 Oct 62, by Siemens Schertwerke Aktiengesellschaft.

DESCRIPTORS: *Semiconductors, *Silicon, Electric connectors, *Antimony, *Gold.

SOME ASPECTS OF THE TELEVISION BROADCASTING NET IN THE NETHERLANDS. 19 Oct 60 [4]p.
USASIA: H-6733a; JPRS: R-1199-D.
Order from OTS or SLA $1.10 60-31857

Trans. of PTT Bedrijfsbanden (Netherlands) 1958, v. 19, no. 10, p. 294-295.

DESCRIPTORS: *Communication systems, *Television communication systems, Television antennas, *Netherlands.

SOVIET AUTOMATIC CONTROL RESEARCH.
31 Aug 62 [50]p. 51 refs. JPRS: 15071.
Order from OTS or SLA $4.60 62-32837

Trans. of Avtomatyka (USSR) 1962, no. 1, p. 10-23 and 26-45.

DESCRIPTORS: Automatic, *Control systems, Theory, Statistical processes, Stability, Circuits, Synthesis

Contents:
New viewpoints in multiloop control system theory
Relation of invariance theory to statistical methods of studying control systems, by O. G. Ivakhenko
Invariance of multi-circuit systems without linkage by disturbance, by V. M. Kuntsevych
Invariance conditions for closed impulse systems, by Yu. V. Krementulo

SOVIET INDUSTRIAL DEVELOPMENT: [SELECTED] TRANSLATIONS ON SOVIET ELECTRICAL EQUIPMENT NO. 19. 6 July 62 [24]p. JPRS: 14398.
Order from OTS or SLA $2.60 63-13110

Trans. of Bumazhnaya Promyshlennost' (USSR) 1962 [v. 37] no. 1, p. 17-19; Steklo i Keramika (USSR) 1962 [v. 19] no. 4, p. 37-38; and from Ekonomicheskaya Gazeta (USSR) 1961, no. 19, p. 15 and 31.

DESCRIPTORS: *Industrial production, Electrical industry, *Electrical equipment, *Wood pulp, Processing, *Paper, Capacitors, *Electric insulation, *Ceramic materials, *Mica, *Plastics.

Contents:
Digestion of pulp for thin capacitor paper, by B. G. Milov and M. I. Vitotova
The future course of high-voltage insulator production, by Ya. S. Proskurovskii and A. M. Khaikin
Electrical insulation: mica and new synthetic forms, by F. Gorshkov
Electrical industry lacks insulator plastics, by R. Kulakova and I. Mayofis.

SOVIET INDUSTRIAL DEVELOPMENT: [SELECTED] TRANSLATIONS ON SOVIET ELECTRICAL EQUIPMENT NO. 20. 9 July 62 [24]p. JPRS: 14412.
Order from OTS or SLA $2.60 63-13091

Trans. of Elektricheskie Stantsii (USSR) 1962 [v. 33] no. 1, p. 92; Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1961, no. 12, p. 43-49; Vestnik Elektropromyshlennosti (USSR) 1962 [v. 33] no. 2, p. 77-80; and from Ekonomicheskaya Gazeta (USSR) 1961 [no. 12] 23 Oct, p. 8.

DESCRIPTORS: *Industrial production, Electrical industry, *Electrical equipment, *Transformers, Standards, *Electric motors, Power plants, *Turbines, *Generators, *Induction motors, Conferences, Explosion damage, *Cermets.

Contents:
New overload standards for aluminum-coil transformers
New industrial and traction motors from the "Dinamo" Plant, by A. Kozlov
Modern high-power turbogenerators, by P. N. Klyusov
New three-phase induction motors, by G. F. Orm
Conference on explosion-proof electrical equipment, by E. N. Zikeev and V. A. Khorunzhii
Application of ceramet products in the electrical industry, by A. B. Al'tman.

SOVIET INDUSTRIAL DEVELOPMENT: [SELECTED] TRANSLATIONS ON SOVIET ELECTRICAL EQUIPMENT NO. 21. 2 July 62 [33]p. JPRS: 14325.
Order from OTS or SLA $3.60 63-13116

Trans. of Promyshlennost' Armenii (USSR) 1961 [v. 4] no. 9, p. 30-34; Energetik (USSR) 1962 [v. 10] no. 1/2, p. 39; no. 3, p. 37-38; and from Pravda, Leningrad (USSR) 1962, 30 Jan, p. 1; 20 Mar, p. 2.

DESCRIPTORS: *Industrial production, Electrical industry *Electrical equipment, *Electric cables, Power, Electric insulation, *Rubber, Industrial plants, Economics, Machines, *Circuit breakers, *Electromagnetic drives, Disconnect fittings, *Electric switches

Contents:
New 10-kv power cable, by K. Oganesyan and Yu. Kabalaliev
Increasing production of heavy electrical equipment and components, by V. Afanas'ev
Leningrad electrical machine building plants derelict in coordinated introduction of new technology, by V. Berezov
New high-voltage breakers, drive mechanisms, disconnectors, and shorting switches
Indoor current transformers for 20 kv.

TASKS OF LOCAL TELEPHONE SERVICES. 10 Nov 58 [8]p. JPRS(NY)-L-455.
Order from OTS or SLA $1.10 59-11030

Trans. of Gospodarka Lacznosci (Poland) 1958, no. 3, p. 13-15.

DESCRIPTORS: Telephones, *Telephone communication systems, Maintenance, Operation, Economics, *Communication systems, *Poland.

TELECOMMUNICATIONS SERVICE IN 1958. 10 Nov 58 [8]p. 1 ref. JPRS(NY)-L-454.
Order from OTS or SLA $1.10 59-11033

Trans. of Gospodarka Lacznosci (Poland) 1958, no. 3, p. 11-12.

DESCRIPTORS: *Telephone communication systems, *Communication systems, Telephones, *Telegraph systems, Quality control, Countermeasures, Radio broadcasting, *Poland.

In 1958 there will occur the further development of telecommunications as expressed in the activation of a number of major objects and facilities. This will doubtless influence greatly the fulfillment of the quantitative and qualitative plan of telecommunication services. (Author)

TRANSISTOR AMPLIFIER GAIN ADJUSTER. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese utility model 37-27339, 10 Oct 62, by Nippon Electric Co., Ltd.

DESCRIPTORS: *Transistor amplifiers, *Automatic volume control, Amplifiers.

TRANSISTOR AUTOMATIC GAIN CONTROL USED FOR WIDE-BAND OPERATING EQUIPMENT. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-16310, 12 Oct 62, by Sony Corp.

DESCRIPTORS: *Transistors, *Automatic volume control, Broadband, Electronic equipment.

TRANSISTOR GAIN CONTROL SUITABLE FOR USE IN TRANSISTORIZED TV RECEIVER. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-16309, 12 Oct 62, by Sony Corp.

DESCRIPTORS: *Transistors, *Automatic volume control, *Television receivers.

TRANSISTOR POWER AMPLIFIER USING NEGATIVE FEEDBACK. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-16313, 12 Oct 62, by Telefunken Gesellschaft mith Beschrenkter Haftung.

DESCRIPTORS: *Transistors, *Power amplifiers, Feedback.

TRANSISTOR PROTECTION FROM MAL-FUNCTIONING DUE TO WRONG CONNECTIONS. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-15866, 6 Oct 62, by Hitachi Lamp Co., Ltd.

DESCRIPTORS: *Transistors, *Electric connectors.

USSR INDUSTRIAL DEVELOPMENT: SOVIET ELECTRICAL EQUIPMENT NO. 26. 6 Nov 62 [34]p. JPRS: 16058.
Order from OTS or SLA $3.60 62-33688

Trans. of Mekhanizatsiya i Avtomatizatsiya Proizvodstv. (USSR) 1962 [v. 16] no. 3, p. 48; Energetik (USSR) 1962 [v. 10] no. 6, p. 38-40; and 13 selected articles from 1962 issues of 8 Russian newspapers.

DESCRIPTORS: *Industrial production, *Electrical equipment, *Transformers, Aluminum wire, Industrial plants, Fans, Automation, *Generators, *Electric motors, *Switches, Economics, Vacuum furnaces, Lighting equipment, *Computers.

Contents:
Aluminum windings to replace copper in the tiraspol' "TO-20A" transformers

Expanded production of industrial fans at Ventspils machinery plant
Poor use of new equipment retards automation of Novosibirsk Turbogenerator plant, by D. Matvienko and others
Efforts to speed up introduction of new A2 and AO2 electric motor series
High-voltage equipment from the elektroapparat plant, 1 and 2
Production expected where supplies are nonexistent, by A. Evsyukov
Longer-range planning needed in production of heavy electrical equipment
New vacuum-resistance furnace plant in Armenia, by S. Levin
Wide market enjoyed by Erevan lighting equipment plant by R. Meliksetyan
200-kw and 600-kw generator production at Erevan electrical machine-building plant
A new computer designed for savings banks
First 360-kva three-phase transformer being built
Tiraspol' elektrodvigatel' plant sets example in mastering new output, by V. Zhilko

Moldavian electrical machinery awarded prizes at Moscow exhibition
New electrical consumer goods being designed by Moldavian industry for sale in 1963.

WARSAW AFTER REORGANIZATION. 2 Aug 60 [4]p.
USASIA: H-6808a; JPRS: R-1030-D.
Order from OTS or SLA $1.10 60-31504

Trans. of Lacznosc (Poland) 1958 [v. 9] no. 37, p. 1.

DESCRIPTORS: *Communication systems, *Telephone communication systems, Personnel, *Poland.

WARSAW NEWS: INVESTMENTS OF MAIN TELECOMMUNICATIONS OFFICE (LONG DISTANCE). 2 Aug 60 [5]p. USASIA: H-6816c; JPRS: R-1044-D.
Order from OTS or SLA $1.10 60-31518

Trans. of Lacznosc (Poland) 1959 [v. 10] no. 4, p. 5.

DESCRIPTORS: *Communication systems, *Telephone communication systems, *Poland.

WINDING OF TWO-PHASE ALTERNATING CURRENT-MACHINE FOR RECONNECTING THE POLES IN THE RELATIONSHIP 2:3. [1962] 5p.
Order from K-H $6.25 K-H 9864

Trans. of Swedish patent 47,702, n.d.

DESCRIPTORS: *Alternating current, Machines, *Wire winding machines.

Adaszewski, W. and Dudzinski, Z.
CONCRETE STEP IN DEVELOPMENT OF ECONOMIC RESEARCH ON INVESTMENTS IN COMMUNICATIONS 10 Nov 58 [15]p. JPRS(NY)-L-452.
Order from OTS or SLA $1.60 59-11031

Trans. of Gospodarka Lacznosci (Poland) 1958, no. 3, p. 1-4.

DESCRIPTORS: *Communication systems, Communication equipment, Economics, *Poland.

Alekseev, K. B. and Voskresenskii, V. V.
INCREASE OF ACCURACY OF STABILIZATION SYSTEMS. Nov 62 [6]p. 5 refs.
Order from ARS in Its Journal, v. 32, no. 11, $3.00

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Elektromekhanika (USSR) 1960 [v. 3] no. 9, p. 62-72. An unedited rough draft trans. is available from OTS or SLA $1.60 as 62-15834, MCL-1356, 22 Jan 62 [19]p.

DESCRIPTORS: Servo systems, Servomechanisms, Control systems, Automatic, *Stabilization systems, Errors, Reduction, Transients, Mathematical analysis.

For abstract see Technical Translations 8: 675, 1962.

Belotserkovskii, Grigorii Bentsionovich.
RADAR EQUIPMENT: INTRODUCTORY NOTE, PREFACE, CONTENTS. 7 Nov 62 [14]p. JPRS: 16067
Order from OTS or SLA $1.60 62-33682

Trans. of mono. Radiolokatsionnye Ustroistva, Moscow, 1961, p. 2-3 and 429-432.

DESCRIPTORS: *Radar equipment, Electrical engineering, Engineering

Driller, Albert.
THE DEVELOPMENT OF ARC STEELMAKING FURNACES AND OF ELECTRODE CONTROL MECHANISMS. [1962] [13]p.
Order from SLA $1.60 62-14419

Trans. of [ETZ] Elektrotechnische Zeitschrift. [Ausgab B. der Elektrotechniker] (Germany) 1956, v. 8, no. 2, p. 41-47.
Another trans is available from MT, Jan 60.

DESCRIPTORS: *Electric furnaces, Design, *Electrodes, Control, Steel, Production.

Dudzinski, Zbigniew.
QUANTITATIVE DEVELOPMENT OF RADIO RECEIVERS IN POLAND IN THE PERIOD OF A LONG RANGE PLAN (Rozwoj Ilosciowy Radiofonii Odbiorczej W Polsce W Okresie Planu Perspektywiczwego). [1962] [14]p. (figs. omitted) 3 refs. H 8819; JPRS(R-1564-D).
Order from OTS or SLA $1.60 62-25197

Trans. of Tele-Radio (Poland) 1959, v. 4, no. 3, p. 113-123.

DESCRIPTORS: *Communication systems, *Poland, *Radio receivers, Statistical analysis.

Enomoto, Masamichi.
METHOD OF FABRICATING SEMICONDUCTOR DEVICE WHICH HAS NEGATIVE POTENTIAL CHARACTERISTIC IN FORWARD REGION. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-16912, 19 Oct 62.

DESCRIPTORS: *Semiconductors, Manufacturing methods, Electric potential.

Fominykh, Yu.
ELECTRONIC ENGINEERING: IN THE HANDS OF ENGINEERS. 7 Nov 62 [4]p. JPRS: 16078.
Order from OTS or SLA $1.10 62-33689

Trans. from Izvestiya (USSR) 1962, 3 Oct.

DESCRIPTORS: Engineering, *Electronic equipment, *Digital computers, Computers, *Programming, Engineering personnel, Personnel

Genov, Lyudmil.
FREE VIBRATIONS OF A COIL (Svobodnye Kolebaniya Katushki). [1962] [15]p. (foreign text included) 8 refs. NLL M. 3545.
Order from OTS or SLA $1.60 62-24639

Trans. of Elektrichestvo (USSR) 1960, no. 5, p. 55-59.

DESCRIPTORS: *Coils, Vibration, Voltage, Transformers, Fouier analysis, Series, Electric currents, Conductivity, Magnetic fields, Frequency.

Gerber, W.
THE SWISS TELEVISION NETWORK: ITS FUNCTION AND ITS STRUCTURE. 6 Oct 60 [19]p. USASIA: H-6762/60; JPRS: R-1178-D.
Order from OTS or SLA $1.60 60-31835

Trans. of [PTT Technische Mitteilungen] (Switzerland) 1957, v. 35, no. 11, p. 441-455.

DESCRIPTORS: *Communication systems, *Television communication systems, Standardization, Television transmitters, *Switzerland.

Harada, Saburo.
METHOD OF MANUFACTURING SINGLE CRYSTAL SEMICONDUCTOR FOIL. Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-13915, 13 Sep 62.

DESCRIPTORS: *Semiconductors, *Single crystals, *Foils, Manufacturing methods.

Kasabov, I.
ON THE STRUCTURE OF THE BARRIER LAYER OF SELENIUM RECTIFIERS (Varkhu Stroyezha na Zapirashitaya Stroy na Selenovite Tokoizpraviteli). Jan 61, [42]p. 34 refs. RTS 1514.
Order from OTS or SLA $4.60 61-15724

Trans. of Bulgarska Akademiya na Naukite. Izvestiya: Seriya Fizicheska, 1956, v. 6, p. 111-144.

DESCRIPTORS: *Selenium rectifiers, *Rectifiers, Electrical equipment, Surfaces, Heat treatment, Semiconductors, Evaporation, Cadmium, Junction boxes, Resistance, Voltage, Electrodes.

Kuratomi, Takiro.
THERMOELECTRIC SEMICONDUCTOR ASSEMBLY FULLY UTILIZING PELTIER EFFECT. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese utility model 37-28615, 23 Oct 62.

DESCRIPTORS: *Semiconductors, *Thermoelectricity.

Lehnert, K.
TASKS AND PROSPECTS OF TECHNOLOGY IN THE TELECOMMUNICATION INDUSTRY (Zadania i Perspektywy Technologii w Przemysle Telekomunikacyjnym) (Ukoly a Perspektiva Technologie v Slaboproudem Prumyslu) tr. by Henryk Uznanski and F. Foniok. [1959] [8]p. H-4061.
Order from OTS or SLA $1.10 59-21099

Trans. of Wiadomosci Telekomunikacyjne (Poland) 1956, no. 4, p. 90-92 (original article as Slaboproudy Obzor (Czechoslovakia) 1954 [no. 6] p. 280).

DESCRIPTORS: *Industrial research, Communication systems, Production, Standardization, Labor, Scientific research, Welding, Casting, *Industrial production, *Communication equipment, Telephone communication systems.

Leman, Maria.
INDUSTRIAL COMBINES ARE TECHNICALLY MINDED; THE COMBINE OF TECHNOLOGICAL THOUGHT.
1 Aug 60 [8]p. USASIA: H-6825; JPRS: R-1014-D.
Order from OTS or SLA $1.10 60-31496

Trans. of Lacznosc (Poland) 1960 [v. 11] no. 9, p. 1.

DESCRIPTORS: *Communication systems, Industrial research, *Electronics laboratories, *Poland.

Leman, Maria.
WHAT HAPPENED TO AN IDEA. 2 Aug 60 [7]p.
USASIA: H-6828b; JPRS: R-1052.
Order from OTS or SLA $1.10 60-31526

Trans. of Lacznosc (Poland) 1960 [v. 11] no. 13, p. 3.

DESCRIPTORS: *Communication systems, *Telephone communication systems, *Poland, Panel boards (Electricity).

Lunts, A. G.
APPLICATION OF BOOLEAN MATRIX ALGEBRA TO THE ANALYSIS AND SYNTHESIS OF RELAY-SWITCHING CIRCUITS. [1962] 5p. 3 refs. MDF L-115.
Order from OTS or SLA $1.10 62-23217

Trans. of A[kademiya] N[auk] SSSR. Doklady, 1950, v. 70, no. 3, p. 421-423.
Other translations are available from SLA as RT-4286 and from LC or SLA mi$1.80, ph$1.80 as 60-13616, M-V Trans-2203, 20 Apr 56 [7]p.

DESCRIPTORS: *Switching circuits, Circuits, Relays, *Electric relays, Synthesis, Mathematical analysis, *Matrix algebra, *Algebras.

For abstract see Technical Translations 3: 788, 1960.

Mimura, Y., Sakao, F., and Hasikuni, M.
PROBLEMS CONCERNING COOLED WALLS OF CHANNELS IN A-C AND D-C MDH ELECTRIC POWER GENERATORS. [1962] 13p.
Order from ATS $24.50 ATS-58P62J

Trans. of [Nihon Koku Gakkaishi] (Japan) 1962, v. 10, no. 101, p. 174-179.

DESCRIPTORS: *Generators, *Electric power production, *Alternating current, *Direct current, Electrical equipment.

Münch, W. von and Salow, H.
SILICON SWITCHING TRANSISTOR. [1962] 15p. 6 refs.
Order from SLA $1.60 62-16682

Trans. of [NTZ]; Nachrichtentechni[sche] Zeit[schrift] (West Germany) 1961 [v. 14] no. 9, p. 436-440.

DESCRIPTORS: *Transistors, *Switches, *Switching circuits, *Silicon, Design, *Data storage systems.

Pausch, H.
CCI-CODE SIGNALLING FOR INTERNATIONAL TELEPHONE TRAFFIC (Die CCI-Codewahl für den Internationalen Fernsprechweitverkehr). [1962] [18]p. (figs. omitted). H-8440; JPRS (R-1644-D).
Order from OTS or SLA $1.60 62-25232

Trans. of NTZ [Nachrichtentechnische Zeitschrift] (West Germany) 1960 [v. 13] no. 6, p. 277-290.

DESCRIPTORS: Communication systems, *Telephone communication systems, Telephone signals, *Coding.

Phillips N. B.
METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE (USING A CENTRIFUGAL SEPARATING MACHINE FOR DOT FORMATION). Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-14769, 21 Sep 62.

DESCRIPTORS: *Semiconductors, Manufacturing methods, Centrifuges, Machines.

Phillips, N. B.
PROCESS FOR CONNECTING LEAD WIRES ONTO SEMICONDUCTOR CRYSTAL BY HIGH TEMPERATURE AND PRESSURE TREATMENT. Sep 62.
Order from WBI $2.00

Trans. of main claims, including drawings, of published Japanese patent 37-14766, 21 Sep 62.

DESCRIPTORS: *Semiconductors, Electric connectors, Electric wire, Temperature, Pressure.

Pogodzinski, L.
SUCCESS OF KATOWICE TECHNICIANS. 2 Aug 60 [6]p.
USASIA: H-6808b; JPRS: R-1031-D.
Order from OTS or SLA $1.10 60-31505

Trans. of Lacznosc (Poland) 1958 [v. 9] no. 37, p. 4.

DESCRIPTORS: *Communication systems, *Teletype systems, Test equipment, *Poland.

Reichelt, W. and Heraeus, W. C.
HIGH VACUUM EVAPORATION AND CONDENSATION OF ALLOYS AND ITS APPLICATION TO THE MANUFACTURE OF ELECTRICAL RESISTORS. [1962] 11p. 10 refs.
Order from SLA $1.60 62-16685

Trans. of Vakuum-Technik (West Germany) 1953, v. 2. no. 12/13, p. 256-259.

DESCRIPTORS: *Resistors, *Electrical equipment, Production, *Alloys, Magnetic properties, *Evaporation, Intermetallic compounds, Conductors, *Condensation reactions, *Vacuum apparatus, Metals, Coatings, *Ferromagnetic materials, *Semiconductors.

Sediakin, N. M.
PROBABILITA CRESENTE DI RIVELAZIONE DEL SEGNALE DI UNA STAZIONE RADRA (Growing Probability of Detection of the Signal of a Radar Station) 11p. 1 ref. CNP-4. (text in Italian).
Order from OTS or ETC $1.85 62-26083

Trans. of #Radiotekhnika (USSR) 1959, v. 14 [no. 5] p. 44-48.
Another trans. is available in English from OTS $0.50 as 60-21771, APL/JHU TG-230-T166, 30 Mar 60, 5p.

DESCRIPTORS: *Radar interception.

Siforov, V. I.
PROSPETTIVE DELLA RADIOELETTRONICA (Perspective of Radioelectronics). 11p. CNP-50 (text in Italian).
Order from OTS or ETC $1.85 62-26122

Trans. of Akademiya Nauk SSSR. Vestnik, 1961 [v. 31] no. 9 [p. 17-24].

DESCRIPTORS: *Radio, Electronic equipment.

Sontheimer, Georg.
PROCESS FOR THE GENERATION OF ELECTRICAL POTENTIALS AND CURRENTS BY MOVING A CONDUCTOR THROUGH A MAGNETIC FIELD. [1962] 12p.
Order from OTS or SLA $1.60 62-18310

Trans. of German patent 841613, cl. $21d^1$, gr. 5, s 1050 VIII d/$21d^1$, pat. appl. pub. 4 Oct 51, granting of pat. pub. 30 Apr 52, issued 16 June 52.

DESCRIPTORS: *Magnetic fields, *Conductors, Motion, *Electric currents, *Electric potential, Fluid flow, Gas flow, Radioactive isotopes, *Induction generators.

The invention consists in that a flowing conducting substance, for example a flowing conducting liquid or a flowing conducting gas or a mixture of both is used as the conductor which is moved. As a further invention a flowing substance (gas, vapor, liquid or mixture) which is otherwise not a conductor, but which has been made conductive by the action of radioactive substances can be used.

Steen, L. J. v. d.
RADIO BROADCASTING IN CURACAO. 19 Oct 60 [9]p. USASIA: H-6734; JPRS: R-1200-D.
Order from OTS or SLA $1.10 60-31858

Trans. of PTT Bedrijfsbanden (Netherlands) 1959, v. 20 no. 2, p. 52-54.

DESCRIPTORS: *Communication systems, *Radio broadcasting, Programming, Caribbean Islands, *Netherlands.

Suga, Yoshio and Aoki, Masaharu.
PROCESS FOR MANUFACTURING CADMIUM SELENIDE P-N JUNCTION NONSYMMETRIC CONDUCTOR DEVICE. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-16065, 9 Oct 62.

DESCRIPTORS: *Conductors, *Junction boxes, *Cadmium compounds, *Selenides, Processing, Manufacturing methods.

Wetzger, J.
THE INTRODUCTION OF THE MAGNETIC AMPLIFIER FOR THE HIGH-SPEED CONTROL OF ROLLING MILL DRIVES. [1960] [20]p.
Order from SLA $1.60 62-16855

Trans. of Stahl und Eisen (West Germany) 1955, v. 75, 21 Apr, p. 478-485.
Another trans. is available from BISI £6 15s as BISI-1700 [1960].

DESCRIPTORS: *Rolling mills, Control systems, *Electric motors, Magnetic amplifiers, Quality control, Electrical equipment.

Yantovskii, E. Y.
OPERATING BODY FOR MAGNETOGASDYNAMIC ELECTRIC MOTORS (Rabochee Telodlya Magnitogazodinamicheskikh Elektricheskikh Mashin). 2 May61 [2]p. MCL-918/1.
Order from OTS or SLA $1.10 61-23839

Unedited rough draft trans. of #Byulleten' Izobretenii (USSR) 1960, no. 11, p. 31 (Russian patent 128950, cl. 21g, 35, dated 7 Sep 59, 638380/24).

DESCRIPTORS: *Magnetohydrodynamics, *Electric motors, Operation, Rare gases, Alkali metals, Vapors, Neon, Cesium, Electrical conductance.

Operating body for magnetogasdynamic electric motors, i.e. synchronous motor with rotating inductor and with in air gap placed chamber through which is driven the operating body-inert gas with an alpali metal vapor admixture, characterized by the fact that to attain maximum electro conduction, it is made up of Neon with cesium vapor admixture. (Report quoted in its entirety)

Mechanical Engineering

COMPRESSED FLUID TUBULAR STEAM GENERATOR WITH INTERMEDIATE SUPERHEATER HEATED BY THE EXHAUST GASES. Sep 62 (drawings omitted).
Order from INFOSERV $10.00

Trans. (text only) of French patent 845,658, by Sulzer Freres S. A., 1939.

DESCRIPTORS: Steam, Generators, Heaters, Heating, Exhaust gases, Gases, Steam power plants, Boilers.

CONNECTION PLINTHS FOR CABLE HEADS. [1962] 3p.
Order from K-H $3.75 K-H 8863

Trans. of Norwegian patent 56, 447, n. d.

DESCRIPTORS: *Cable supports.

DEVICE FOR REGULATING THE FEED WATER SUPPLY FOR SEVERAL FORCED CIRCULATION BOILERS SUPPLIED FROM ONE POINT. Sep 62 (drawings omitted).
Order from INFOSERV $10.00

Trans. (text only) of German patent 715, 931, by Askania-Werke AG, 1941.

DESCRIPTORS: *Boilers, Feed water, *Feed water regulators.

FORCED CIRCULATION STEAM GENERATOR. Sep 62 (drawings omitted).
Order from INFOSERV $10.00

Trans. (summary only) of French patent 1, 120, 910, by Société Française des Constructions Babcock & Wilcox [1959].

DESCRIPTORS: Steam, Generators, *Steam power plants, Operation, Boilers.

METHOD FOR THE UTILIZATION OF THE BOILER HEAT OF VERY HIGH PRESSURE STEAM GENERATORS. Sep 62 (drawings omitted).
Order from INFOSERV $10.00

Trans. (text only) of French patent 625, 238, by Siemens-Schuckert Werke GmbH, 1927.

DESCRIPTORS: *Boilers, *Heat transfer, Steam Generators, Pressure, *Steam power plants.

METHOD OF HEATING ELECTRIC RESISTANCE FURNACES AND APPARATUSES TO HIGH TEMPERATURE. [1962] 3p.
Order from K-H $3.75 K-H 8396

Trans. of Swedish patent 153, 961 [1957].

DESCRIPTORS: *Electric furnaces, Heating, High temperature research.

SOVIET INDUSTRIAL DEVELOPMENT: [SELECTED] TRANSLATIONS ON SOVIET POWER MACHINERY NO. 2. 7 Aug 62 [15]p. JPRS: 14755.
Order from OTS or SLA $1.60 63-13114

Trans. of Energomashinostroenie (USSR) 1962 [v. 8] no. 6, p. 32-35 (excerpts) and 40-41.

DESCRIPTORS: *Industrial production, *Power plants, *Boilers, Evaporators, *Gas turbines, Specifications, Conferences.

An industrywide conference on power machine building, by V. G. Tyryshkin and L. I. Ponarskii.

Contents:
The TGM-153 gas-mazout boiler with a gas evaporator, by A. A. Sukhonosov and A. S. Bashmakov
Comparative data on TGM-153 and TGM-151 boilers
The design of the 10, 000-kilowatt gas turbine installation, by B. S. Revzin

TUBULAR COOLER FOR SUPERHEATED STEAM. Sep 62 (drawings omitted).
Order from INFOSERV $10.00

Trans. (text only) of German patent 909, 343, by Kohlenscheidungsgesellschaft mbH, 1954.

DESCRIPTORS: *Steam, Cooling, Steam power plan s, Boilers, *Heat exchangers.

Ordnance, Missiles, and Satellite Vehicles

FORTIFICATION [MANUAL] PT. I: FORTIFICATION PLANNING. 13 Feb 62 [63]p. AERDL T-186(1); Army-9326-62-(1); JPRS: R-2068-D.
Order from OTS or SLA $6.60 62-33451

Trans. of mono. Linnoittamisohjesaanto, pt. 1, Lahti, 1951.

DESCRIPTORS: *Instruction manuals, Combat personnel, Personnel, Training, Antiaircraft defense systems, Antiaircraft guns, Guns, Civilian defense systems, Military intelligence, Military facilities, Forestry, Drainage, Climatic factors, Terrain, Mapping, *Army operations, *Finland.

Contents:
Fortification
Fortification stages and emergency arrangements
Fortification intelligence and planning
Fortification installations
Forest clearing and thinning-out of woods
Drainage
Measures caused by seasonal changes
Terrain marking and mapmaking. (See also 62-33356)

FORTIFICATION [MANUAL] PT. V: FORTIFICATIONS TASKS FOR ANTI-AIRCRAFT ARTILLERY. 30 Jan 62 [126]p. AERDL T-186(5); Army 9326-62 (4); JPRS: R-2071-D.
Order from OTS or SLA $10.10 62-33356

Trans. of mono. [Linnoittamisohjesaanto] pt. 5, Helsinki, 1958, p. 2-95.

DESCRIPTORS: *Instruction manuals, Combat personnel, Personnel, Training, Artillery units, *Artillery, Artillery fire, *Antiaircraft defense dystems, *Antiaircraft fire control systems, Antiaircraft gunnery, Antiaircraft guns, Guns, Army operations, *Finland.

FORTIFICATION MANUAL, VOL. IV_1: FORTIFICATION OF FIELD ARTILLERY. 2 Mar 62 [79]p. AERDL T-186(4); Army 9326-62(3); JPRS: R-2070-D.
Order from OTS or SLA $7.60 62-33450

Trans. of mono. Linnoittamisohjesaanto, vol. IV_1: Kenttatykiston Linnoittamistyot, Helsinki, 1952, p. 3-60.

DESCRIPTORS: *Instruction manuals, Combat personnel, Personnel, Training, *Artillery units, *Artillery, Artillery fire, Fire control systems, Military facilities, Construction, *Army operations, *Finland.

Andreescu, D. St.
THE INTERCEPTING OF MISSILES. 13 Sep 62 [11]p. JPRS: 15258.
Order from OTS or SLA $1.60 62-33029

Trans. of Stiinta si Tehnica (Rumania) 1962, v. 14, no. 4, p. 30-33.

DESCRIPTORS: *Guided missiles, Surface to surface, *Interception, Rockets, Projectiles, Nuclear warheads

Beletskii, V. V.
CLASSIFICATION OF THE MOTIONS OF AN ARTIFICIAL EARTH SATELLITE ABOUT THE CENTER OF MASS [Klassifikatsiya Dvizhenii Iskusstvennogo Sputnika Zemli Okolo Tsentra Mass] tr. by Astrid Werner. Nov 62 [9]p. 3 refs.
Order from ARS in ITS Journal, v. 32, no. 11, $3.00

Trans. of Iskusstvennye Sputniki Zemli (USSR) 1961, v. 6, p. 11-32.
Another trans. is available from STS $19.75 as STS Trans #3, 5 Jan 62, 21p.

DESCRIPTORS: *Orbital flight paths, Satellites, *Satellite vehicle research, *Equations of motion, Vector analysis, *Satellite vehicle trajectories.

Ginzburg, M. A.
DOUBLE ELECTRICAL LAYER ON THE SURFACE OF A SATELLITE, tr. by Astrid Werner. Nov 62 [7]p. 11 refs.
Order from ARS in Its Journal, v. 32, no. 11, $3.00

Trans. of [Nauchno-Issledovatel'skii Institut Zemnogo Magnetizma, Ionosfery i Rasprostraneniya Radiovoln]. Trudy (USSR) 1960, v. 17(27) p. 187-202.

DESCRIPTORS: *Electrical double layer, *Satellite vehicles, Surface properties, Satellite vehicle research, Magnetic fields, Ionosphere, Ions, Density, Electric fields, Drift, Thermodynamics, Statistical functions, Differential equations, Electric potential.

Margolin, A. D.
STABILITY OF BURNING OF POROUS EXPLOSIVES. 23 Jan 62 [7]p. 4 refs. FTD-TT-61-389; AD-270 786.
Order from OTS or SLA $1.10 62-15831

Unedited rough draft trans. of Akademiya Nauk SSSR. Doklady, 1961, v. 140, no. 4, p. 867-869.

DESCRIPTORS: *Explosives, *Powders, *Porous materials, Combustion, Stability, Pressure, Flame propagation, Mathematical analysis, Propellant grains.

Mikhailov, K.
ROCKETS AND SATELLITES SERVE SCIENCE: RESULTS OF INVESTIGATING THE COSMOS. [PT. I]. 16 Feb 62 [10]p. FTD-TT-62-28.
Order from OTS or SLA $1.10 62-23674

Unedited rough draft trans. of Nauka i Zhittya (USSR) 1961 [v. 11] no. 10, p. 18-20.

DESCRIPTORS: *Rocket research, *Satellite vehicle research, Space flight, Geophysical explorations, Rockets, Satellite vehicles, Launching, Gravity.

Parfenov, V. A.
RETURN FROM THE COSMOS. 28 Mar 62 [11]p. FTD-TT-62-119.
Order from OTS or SLA $1.60 62-24351

Unedited rough draft trans. from Nauka i Zhizn' (USSR) 1960 [v. 27] no. 6, p. 31-33.

DESCRIPTORS: *Space flight, *Spaceships, *Re-entry vehicles, Re-entry aerodynamics, Gliders, All-wing gliders, Pneumatic devices, Space capsules, Spaceship cabins, Air brakes, Satellite vehicles.

Petrov, V.
FLIGHTS INTO THE COSMOS. 22 Mar 62 [12]p. FTD-TT-62-316.
Order from OTS or SLA $1.60 62-24342

Unedited rough draft trans. of Radio [Moscow] (USSR) 1961, no. 12, p. 3-5.

DESCRIPTORS: *Space flight, Manned, Astronauts, *Space navigation, *Celestial navigation, Radio navigation, Navigation, Astronautics.

Röhrich, Karl.
ROCKET DETECTION BY MAXIMUM RANGE RADAR (Raketenerfassung Mittels Weitestradar). Apr 60 [23]p. 11 refs. F-TS-9973.
Order from OTS or SLA $2.60 60-19145

Trans. of Zeitschrift für Flugwissenschaften (West Germany) 1958 [v. 6] no. 9, p. 266-271.

DESCRIPTORS: *Rockets, *Guided missiles, Surface to surface, *Detection, *Early warning radar, *Radar equipment, Microwave amplifiers, Amplifiers, *Masers, *Range finding, Radar target designators.

Stanyukovich, K. P.
ELEMENTS OF IMPACT THEORY FOR SOLID BODIES HAVING HIGH (COSMIC) SPEEDS. Sep 62 [13]p. 4 refs.
Order from ARS in Its Journal, v. 32, no. 9, $3.00

Trans. of [Iskusstvennye Sputniki Zemli] (USSR) 1960 v. 4, p. 86-117.

DESCRIPTORS: *Meteorites, Solids, *Impact shock, Planets, Surfaces, Explosions, *Cratering, Penetration, Hypervelocity projectiles, *Satellite vehicle research.

Sanitation and Safety Engineering

Ipekoglu, F. and Turkdogan, A.
THE IMPORTANCE OF NICOTINE IN THE FIGHT AGAINST HARMFUL INSECTS. [1962] 13p.
Order from K-H $16.25 K-H 3006-f

Trans. of Inhisarlar Tutun Institusu. Raporlari (Turkey) 1943, v. 3 [no. 1] p. 17-22.

DESCRIPTORS: *Nicotine, Insects, *Pest control.

Taratsev, N. V.
THE EXTINCTION OF A MINE FIRE WITH THE AID OF CARBON DIOXIDE (Likvidatsiya Pozhara na Shakte s Pomoshohyu Uglekisloty) tr. by L. Meyer. [1962] [3]p. S.M.R.E. Trans. no. 4478; NLL M.3166.
Order from OTS or SLA $1.10 62-24081

Trans. of Bezop[asnost'] Truda v Promyshl[ennosti] (USSR) 1960, v. 4, no. 12, p. 8-9.

DESCRIPTORS: *Carbon dioxide, *Mines, *Fires, *Fire extinguishers, Methanes, Ignition, Welding, Mines.

FOOD, HANDLING, AND PACKAGING EQUIPMENT

Food

Manaresi, Francesco.
IMPROVEMENTS IN APPARATUS FOR THE PREPARATION OF CONCENTRATED SOLUTIONS OF COFFEE AND OTHER PREPARATION OF SOLUBILIZED PRODUCTS. [1962] 5p.
Order from ATS $8.00 ATS-17P63F

Trans. of French patent 1,271,806, filed 21 Sep 60.

DESCRIPTORS: *Coffee, Preparation, Food.

SOVIET INDUSTRIAL DEVELOPMENT: [SELECTED] TRANSLATIONS ON SOVIET FOOD PROCESSING MACHINERY NO. 1. 9 July 62 [17]p. JPRS: 14414.
Order from OTS or SLA $1.60 63-13090

Trans. of Myasnaya Industriya SSSR, 1960 [v. 31] no. 4, p. 1-6.

DESCRIPTORS: *Industrial production, *Food, Processing, *Machines, *Meat, Conferences, Industrial plants.

Sulser, H. and Hogl, O.
APPLICATION OF PAPER CHROMATOGRAPHY TO PROBLEMS OF FOOD CHEMISTRY. II. DIFFERENTIATION OF CIDER AND WINE. [1962] 11p.
Order from K-H $15.00 K-H 3036 e

Trans. of Mitt[eilungen aus dem Geb[iete der] Lebensm[ittelunter suchungen und] Hyg[iene] (Switzerland) 1951, v. 42, p. 395-402.

DESCRIPTORS: *Food, Chemistry, *Paper chromatography, Wines, *Beverages.

MACHINERY, FABRICATION, AND ACCESSORY EQUIPMENT

MACHINE FOR GRINDING AND POLISHING ANNULAR PARTS. Sep 62 (drawings omitted).
Order from INFOSERV $10.00

Trans. (text only) of German patent 543,171, by Herminghausen-Werke GmbH, 1931.

DESCRIPTORS: Machines, *Grinders, Design.

MACHINE-BUILDING INDUSTRY IN COMMUNIST CHINA. 11 Dec 59 [33]p. JPRS: 2068-N.
Order from OTS or SLA $3.60 60-11121

Trans. of Ch'i Ch'e (Chinese People's Republic) 1959, no. 9, p. 11, 23-24 (excerpts); Tien Chi Kung Yeh (Chinese People's Republic) 1959, no. 17, p. 7-10 (excerpts), 19, 21-23; Chung Kuo Tsao Ch'uan (Chinese People's Republic) 1959, no. 3, p. 1 (excerpt), 79-80.

DESCRIPTORS: Machines, *China, *Industrial production, *Passenger vehicles, *Zinc alloys, *Aluminum alloys, *Copper alloys, Industrial plants, *Electrical equipment, Quality control, Scientific organizations, Conferences.

Contents:
Introducing the Shanghai model HK-16 bus, by Chang Ying-jung
Preparation and uses of no. 9-1.5 zinc-aluminum-copper alloy, by Fu Meng-lin
Take advantage of our successes and push forward along the main-line's glorious road to complete the second Five-Year Plan targets three years ahead of schedule
Three large power equipment plants in Harbin advance at leap forward speed
Enterprises directly under Mukden oppose rightist thinking, stimulate effort, and enthusiastically pursue increase-production practice-economy mass movements
Observations on the electrical exhibits in the machinery section of the All-China industry and transportation exhibition
How to improve the quality of product design, by Meng T'ung
Academic activities of China National Institute of Naval Architecture (Shanghai branch) 15 June-31 July 59.

SOVIET INDUSTRIAL DEVELOPMENT: [SELECTED] TRANSLATIONS ON SOVIET CONSTRUCTION MACHINERY NO. 13. 9 July 62 [18]p. JPRS: 14411.
Order from OTS or SLA $1.60 63-13093

Trans. of Avtomobil'nye Dorogi (USSR) 1962 [v. 25] no. 2, p. 4-7; Stroitel'nye i Dorozhnye Mashiny (USSR) 1962 [v. 7] no. 3, p. 1-8, 12-15, 35-37.

DESCRIPTORS: *Industrial production, *Construction, Machines, *Road building equipment, Earth moving equipment, *Hoists, Ball mills, *Excavators.

Contents:
For completion of overall mechanization, by I. P. Borodachev
More new machines for construction workers, by Yu. B. Deinego
SMK-7 automobile crane, by V. G. Myshkin
Impact-action crusher
Development of excavator fleet in the USSR.

SOVIET INDUSTRIAL DEVELOPMENT: SOVIET METALWORKING EQUIPMENT NO. 25. 17 July 62 [44]p. JPRS: 14496.
Order from OTS or SLA $4.60 62-25986

Trans. of VDNKh SSSR. Informatsionnyi Byulleten' [sic] (USSR) 1962, no. 2, p. 8-10; Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1962, no. 3; p. 24, 26, 30-32; no. 4, p. 19-21, 28-29, 31-36, 40-43, 84-89.

DESCRIPTORS: *Industrial production, Machine tool industry, Drilling machines, *Grinders, *Metal forming presses, *Forge presses, Railroad tracks, Heat treatment, Automation, *Micrometers, *Milling machines, *Lathes, *Broaches, Industrial plants, Scientific organizations.

Contents:
Metalworking equipment shown at VDNKh
Model OS-300 special, inclined, six-spindle, diamond-boring machine, by V. I. Shekhter
Model 3510V, two-frame, longitudinal, grinding machine, by L. F. Sorkin
Model KA864 automatic 1000-ton press, by V. V. Magaziner
Press model PM10 for forging tapered switching rails, by D. V. Feofanov
Automatic line for heat-treatment of finger bars, by N. E. Voloshin
The MKT-8 automatic line for final work on micrometer thimbles, by S. E. Vengrinovich
ST-1520 and ST-1497 models of small unit-type machine tools for work on parts shaped as shafts, by S. M. Zonnenberg
Semiautomatic model NT-27 multiple-tool lathe, by V. I. Letyagin
Model 2N58 heavy universal radial-drilling machine, by I. Ya. Kats
Model MSh-186 special automatic surface grinder, by S. S. Krichever
Horizontal continuous broaching machines, by S. F. Glekov and A. A. Vodop'yanov
Automatic lines of Moscow oblast sovnarkhoz, by I. V. Gellert
The technical-economic council of Leningradskii sovnarkhoz, by B. N. Etingof
Profile grinding at Tula and Kaluga plants, by V. P. Kozlikov and P. D. Osiptsov.

PRESENT STATUS AND TRENDS IN THE DEVELOPMENT OF MACHINE BUILDING AND INSTRUMENT MAKING TECHNOLOGY: [SELECTED PARTS]. 11 July 62 [38]p. JPRS: 14435.
Order from OTS or SLA $3.60 63-13115

Trans. of mono. Sovremennoe Sostoyanie i Napravleniya Razvitiya Tekhnologii Mashinostroeniya i Priborostroeniya, Moscow, 1960, p. 3-12 and 553-564.

DESCRIPTORS: *Industrial production, *Machine tool industry, Metallurgy, Manufacturing methods, Instrumentation, Automation, Economics.

Contents:
Preface
Introduction, by A. N. Gavrilov
Future plans for the adoption of advanced technology at metal-working and machine-building enterprises, by V. V. Matveenko
Table of contents.

SOVIET MACHINE BUILDING: SELECTED TRANSLATIONS NO. 54. 20 Apr 61, 29p. JPRS: 9079.
Order from OTS $0.75 61-21735

Trans. of Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1960, no. 7, p. 7-10, 17-25, 27-29; no. 8, p. 19-27, 40-44 and one article with pages unidentified.
##Another trans. of p. 40-42 is available from OTS or SLA $1.60 as 61-23414, MCL-814, 1 Feb 61.

DESCRIPTORS: *Machine tool industry, *Lathes, *Railroad tracks, *Milling machines, *Drilling machines, *Cutting tools, Balances, *Flywheels, Machining, *Broaches, *Hoists, *Road building equipment.

Contents:
Model MR-105 automatic hydraulic copying lathe for machining drills and screw taps, by A. V. Balyaev
Model MS-21 special rail-planing machine, by I. B. Krasnich
Model OF-41 vertical milling machine with programmed operation, by I. I. Knyazhitskii and L. M. Bernshtein
Ten-spindle drilling, boring, and thread-cutting machine model 3A555, by B. I. Cherpakov
Model MK-53KB special multi-cutter semi-automatic machine, by B. P. Kal'nitskii
Model MS-25 machine for the cynamic balancing of rotating parts, by V. D. Shkor
Experience in automating universal metal-cutting equipment
Model 1L72 automatic line for machining flywheel housings, by V. G. Zhavoronkov and N. S. Konoval'tseva
Over-all automatic line for the production of grain-harvesting combine cutting apparatus, by A. B. Aronson and I. N. Sal'man
Model St-1451 eight-position drum type machine, by S. M. Zonnenberg
Model 3A509 automatic unit machine for machining track pins, by V. V. Gamberg
Model 2460 universal two-column jig-boring machine, by V. P. Paritskaya
Model OS-232 horizontal diamond-bit boring machine, by V. I. Shekhter
Model MP55 horizontal broaching unit machine, by V. Ya. Gorfinkel' and V. P. Kuznetsov
##PKT self-lifting crawler cranes, by K. I. Emelin
PVK-25 vibration roller, by A. A. Smolyar and V. I. Somov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CONSTRUCTION MACHINERY NO. 19. 13 Nov 62 [14]p. JPRS: 16126.
Order from OTS or SLA $1.60 63-13073

Trans. of Stroitel'nye i Dorozhnye Mashiny (USSR) 1962 [v. 7] no. 8, p. 7, 16-19, 38.

DESCRIPTORS: *Industrial development, *Construction, Machines, *Road building equipment, *Soil tampers, Specifications, Classification.

Contents:
PVK trailer-type rollers of the Volgograd hydroelectric construction trust, by A. A. Smolyar and V. I. Somov (excerpts)
Grid roller for compacting soils, by Yu. Starodumov (excerpts)
The D-551 roller, by N. P. Pravosudovich (excerpts)
The D-522 motor-driven road roller, by V. P. Radionenko and A. P. Vikharev
Nomenclature of rollers in series production.

USSR INDUSTRIAL DEVELOPMENT: SOVIET METALWORKING EQUIPMENT NO. 33. 22 Oct 62 [37]p.
JPRS: 15821.
Order from OTS or SLA $3.60 62-33519

Partial trans. (excerpts) of Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1962, no. 7, p. 32-35 and 40-46; and from Ekonomicheskaya Gazeta (USSR) 1962, no. 30[51] p. 8-9 and 48; Sovetskaya Belorussiya (USSR) 1962, 20 June, p. 2.

DESCRIPTORS: *Industrial production, *Machine tool industry, *Lathes, Gears, *Cutting tools, *Industrial plants, Drilling machines, Conferences, Quality control.

Contents:
Six-spindle semiautomatic lathe model LA290P-6 by M. B. Fridman
Turret lathe model LA341, by S. B. Magidenko
Gear hobbing machine tool model 5723, by E. M. Gil'dinson
Gear cutting machine tools of the Egor'evsk Komsomolets machine tool building plant, by E. V. Garanin
Planer model 7212G with two uprights and a hydraulic tracer head, by A. I. Ratkevich
Difficulties hindering the creation and introduction of new equipment must be overcome
Moscow jig boring machine plant, by N. Dolotin
Vladimir machine tool building plant, by G. Pavlov
Vitebsk machine tool building plants, by Ya. Gleser
Krasnodar machine tool building plant imeni Sedin, by M. Sokolov
Single spindle automatic turret lathe
The Vitebsk machine tool builders debate the problems connected with improving the quality and dependability of machine tools
Technical Conference on the Problem of Improving Operational Properties and Dependability of Machine Tools, by D. Chaika.

USSR INDUSTRIAL DEVELOPMENT: SOVIET METALWORKING EQUIPMENT NO. 35. 5 Nov 62 [28]p.
JPRS: 16031.
Order from OTS or SLA $2.60 62-33717

Partial trans. of Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1962, no. 8, p. 23-31 and 34-35; Mekhanizatsiya i Avtomatizatsiya Proizvodstva (USSR) 1962 [v. 16] no. 6, p. 5-9; no. 8, p. 4-5; Referativnyi Sbornik. Ekonomiki Promyshlennosti (USSR) 1962, no. 8, p. 99; and from Ekonomicheskaya Gazeta (USSR) 1962, no. 31[52] p. 9 and Pravda, Leningrad (USSR) 1962, 13 July, p. 4.

DESCRIPTORS: *Industrial production, *Machine tool industry, Automation, *Cutting tools, Metal plates, *Broaches, *Drilling machines, *Gears, Locomotives, Industrial plants, *Grinders. Bearings, Cutting torches

Contents:
Automatic continuous production line model VZPL-I, by L. E. Simkin
Automatic machine tool avangard with program controls for the cutting and laying out of metal plates, by G. A. Spynu and V. E. Gizila
Horizontal broaching machine model 7B520, by S. F. Glekov and A. D. Vodop'yanov
Special drilling and tapping machine tool model VS-157, by E. M. Gil'dinson
Pipe cutting machine model GD-28, by L. I. Leibentuller
The manufacture of gears for the 750 HP switcher locomotive, by P. N. Mazurov
The costly errors of the general machine building department of Gosplan RSFSR, by V. Andreev
New automatic lines, by M. E. Makhanek and B. I. Khorosh
Grinding equipment for miniature bearings, by I. Kirpichnikova
The Lithuanian machine tool building industry: book review
Automatic line for the flame cutting of steel plate, by S. I. Leznov

USSR INDUSTRIAL DEVELOPMENT: SOVIET METALWORKING EQUIPMENT NO. 36. 6 Nov 62 [15]p.
JPRS: 16047.
Order from OTS or SLA $1.60 62-33713

Partial trans. of Kuznechno Shtampovochnoe Proizvodstvo (USSR) 1962 [v. 4] no. 8, p. 27 and 30-33; and from Ekonomicheskaya Gazeta (USSR) 1962, no. 32[53] p. 39; Sovetskaya Litva (USSR) 1962, 28 July; Pravda, Leningrad (USSR) 1962, 28 July.

DESCRIPTORS: *Industrial production, *Machine tool industry, *Precision equipment, *Industrial plants, Economics, *Metal forming presses, Carbon, Hydraulic presses

Contents:
Precision metalworking
Difficulties of Vil'nyus 40-Let Oktyabrya plant
Machine tools with program controls are at a standstill, by V. Petrov
Three-station automatic presses for manufacturing graphitic carbon parts, by N. I. Naiguz and others
Performance study of a hydraulic baling press for metal waste and chips, by S. F. Chukmesov and A. I. Zazimko

Bahuaud, Adrien Auguste.
IMPROVED DRILL AND MACHINE FOR GRINDING IT. Sep 62 (drawings omitted).
Order from INFOSERV $10.00

Trans. (text only) of French patent 813,333, 1937.

DESCRIPTORS: *Drills, Design, Machines, *Grinders.

Billigmann, J. and Lenze, J.
EXPERIENCES AND FINDINGS IN A HIGH-SPEED TANDEM COLD REDUCTION MILL. Oct 62.
Order from BISI £10 BISI-2761

Trans. of Stahl [und] Eisen (West Germany) 1962, v. 82 [no. 6] p. 313-337.

DESCRIPTORS: *Rolling mills, Reduction, Construction, Design, Consumption, Production.

Epel'tsveig, A. M.
GEAR ROLLING. USSR Industrial Development: Soviet Metalworking Equipment no. 34. 29 Oct 62 [10]p. JPRS: 15921.
Order from OTS or SLA $1.10 62-33668

Trans. of Mashinostroitel' (USSR) 1962, no. 8, p. 42-44.

DESCRIPTORS: *Industrial production, Machine tool industry, *Gears, *Rolling mills, Manufacturing methods.

Koril, M.
A NEW METHOD FOR THE MEASUREMENT OF VERY SLOW SPEEDS. Oct 62.
Order from BISI £2 5s BISI-2941

Trans. of Verein Deutscher Ingenieure. Zeitschrift (West Germany) 1960, v. 102, 1 Feb, p. 117-119.

DESCRIPTORS: *Machine tools, *Gyroscopes, Measurement, Control, Instrumentation, *Speed regulators, Deflection, Feed mechanisms.

Küpper, H. W. and Grüner, P.
DESIGN OF OBLIQUE ROLLING MILLS AND PLUGS, I-III. Oct 62.
Order from BISI £10 BISI-2790

Trans. of Bänder, Bleche, Rohre (West Germany) 1961 [no. 11] p. 558-564; [no. 12] p. 600-605; 1962 [no. 1] p. 21-24.

DESCRIPTORS: *Rolling mills, Design, Mathematical analysis.

Litzman, E. P.
THEORETICAL STUDY OF THE PROBLEM OF OBTAINING CHIPS (SHAVINGS) ON A DRUM CHIPPER (CHIPPING MACHINE). [1962] 11p. (2 figs. 6 tables omitted).
Order from OTS or SLA $1.60 62-14485

Trans. of Gidroliznaya. i Lesokhimicheskaya Promyshlennost' (USSR) 1960, v. 13, no. 3, p. 6-9.

DESCRIPTORS: *Chipping hammers, *Ball mills, *Wood pulp, *Machine tools, Quality control, *Electric machinery, *Wood pulp machines.

Lychagin, A. S.
DESIGN OF OPEN-HEARTH FURNACES. 1962, 288p.
Order from Butterworth Inc., 7235 Wisconsin Ave., Washington, 14, D. C. $18.50

Trans. of mono. [Proektirovanie Martenovskikh Pechei, Moscow, 1958, 263p.].

DESCRIPTORS: *Open hearth furnaces, Design.

Mäkelt, H.
DETERMINATION OF THE FORCE REQUIREMENT DURING COLD EXTRUSION FOR THE CORRECT SELECTION OF MECHANICAL PRESSES. Oct 62.
Order from BISI £4 BISI-2915

Trans. of Werkstattstechnik [und Machinenbau] (Germany) 1962, v. 52 [no. 4] p. 167-172.

DESCRIPTORS: *Metal forming presses, *Extrusion gears, Nomograms.

Pahlitzch, Gotthold and Dziobek, Klaus.
INVESTIGATIONS ON A HORIZONTAL LOG BAND SAW (Untersuchungen an einer Horizontalen Blockbandsage). June 60, 19p. (23 figs. omitted). FPLD Trans. no. 137.
Order from NRCC mi$0.50, ph$4.50 NRCC C-3491

Trans. of Hols als Roh- und Werkstoff (West Germany) 1959, v. 17, no. 9, p. 364-376.

DESCRIPTORS: *Band saws, Cutting tools, Wood, Trees, Production, *Machine tools, Electric machinery.

Strähuber, H. F.
THE EQUIPMENT OF A NEW COKE OVEN PLANT WITH MEASURING AND CONTROL APPARATUS AND DATA. Oct 62.
Order from BISI £4 15s BISI-2680

Trans. of Stahl und Eisen (West Germany) 1961, v. 81 [no. 24] p. 1574-1581.

DESCRIPTORS: *Industrial plants, *Coke, *Ovens, Industrial equipment, Control systems, Automation.

Engines and Propulsion Systems

CALECHE SUPPORT FOR MOTOR CARD AND THE LIKE. [1962] 7p.
Order from K-H $8.75 K-H 3483

Trans. of Danish patent 40, 609 [1929].

DESCRIPTORS: *Motors, Mounting brackets.

PROCESS AND MACHINE FOR THE PLACING OF A LINING IN A MOTOR CYLINDER OF LIGHT METAL. [1962] 8p.
Order from K-H $10.00 K-H 6600-b

Trans. of Danish patent 56,607, issued 14 Aug 39, runs from 4 Mar 38.

DESCRIPTORS: *Engine cylinders, *Cylinder liners, Machines, Motors, Metals.

PROCESS FOR THE PROVIDING OF A MOTOR CYLINDER OF LIGHT METAL WITH A WEAR BUSHING. [1962] 7p.
Order from K-H $8.75 K-H 6600-c

Trans. of Danish patent 56,692, issued 4 Sep 39, runs from 3 Dec 37.

DESCRIPTORS: *Engine cylinders, Motors, Metals, *Cylinder liners, *Bushings.

Dimentberg, F. M.
FLEXURAL VIBRATIONS OF ROTATING SHAFTS. 1961, 252p.
Order from Butterworth Inc., 7235 Wisconsin Ave., Washington, 14, D. C. $11.25

Trans. of mono. [Izgibnye Kilebaniya Vrashchayushchikhsya Valov, Moscow, 1959, 246p.].

DESCRIPTORS: *Motors, *Shafts, Rotation, Vibration, Velocity, Stability, Tensile properties.

Gutovskii, M. V.
THE TEMPERATURE FIELD OF A DISCHARGE IN AN ELECTRICAL IGNITION SYSTEM. 8 June 62 [17]p. 7 refs. FTD-TT-62-795.
Order from OTS or SLA $1.60 62-32315

Unedited rough draft trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Energetika (USSR) 1961 [v. 4] no. 8, p. 37-46.

DESCRIPTORS: *Ignition systems, *Jet engines, Electrical equipment, *Electric igniters, *Electric discharges, Temperature, Jet engine fuels, Fuels, Ignition.

A method is described of plotting the temperature fields of electrical ignition systems which provides a practical way of studying the effect of the parameters (the size and shape, the energy and the repetition rate) of an electrical discharge on the process of ignition of a chemical fuel. Recommendations are made concerning the creation of new optimum electrical ignition systems for the latest engines of the present and future. (Author)

Ivashchenko, M. M.
AN INVESTIGATION OF THE ROTOR TEMPERATURE OF A GT-600-1.5 GAS TURBINE UNDER OPERATING CONDITIONS. 14 Mar 62 [14]p. 3 refs. FTD-TT-61-411.
Order from OTS or SLA $1.60 62-25412

Unedited rough draft trans. of Energomashinostroenie (USSR) 1961 [v. 7] no. 2, p. 17-21.

DESCRIPTORS: *Gas turbines, Operation, *Gas turbine rotors, Temperature, Test methods, Tests.

Methods are described for the experimental determination of temperatures at various points on a gas turbine rotor. The influence of the start-up speed and the cooling-air temperature on the temperature of the machine rotor are given on the basis of the experimental results.

Lokai, V. I.
THE TEMPERATURE FIELD OF AIR-COOLED DISCS AND RUNNER BLADES OF GAS TURBINES. 21 May 62 [16]p. 6 refs. FTD-TT-62-326.
Order from OTS or SLA $1.60 62-25739

Unedited rough draft trans. of Izvestiya Vysshykh Uchebnykh Zavedenii. Aviatsionnaya Tekhnika (USSR) 1961, no. 1, p. 97-104.

DESCRIPTORS: Air cooled, *Gas turbine disks, *Gas turbine blades, Temperature, Determination.

A sufficiently simple method is given for determining the temperature of the blades and disks of an air-cooled gas turbine. (Author)

Roos, A.
THE SMALL GAS TURBINES: THEIR PROSPECTS FOR THE FUTURE. [1962] 10p.
Order from K-H $12.50 K-H 6247 c

Trans. of la Technique Moderne (France) 1955, v. 47 [no. 11] p. 470-472.

DESCRIPTORS: *Gas turbines.

Rost, H.
MATHEMATICAL METHOD FOR THE CALCULATION OF THE MEAN INTERNAL PRESSURE OF HIGH-SPEED COMBUSTION ENGINES FROM THE PRESSURE-TIME DIAGRAM. [1962] 12p.
Order from K-H $15.00 K-H 10156

Trans. of Techn[ische] Mitt[eilungen] Krupp (West Germany) 1959, v. 17, no. 4, p. 179-183.
Another trans. is available from SLA mi$2.40, ph$3.30 as 60-18112 [1960] [17]p.

DESCRIPTORS: *Internal combustion engines, *Pressure, Mathematical analysis.

Rozenberg, S. Sh.
THE EFFECT OF THERMOPHORESIS ON THE PROCESS OF PRECIPITATION OF ASH PARTICLES ON COOLED BLADES OF GAS TURBINES. 21 Aug 62 [16]p. 7 refs. FTD-TT-62-1025; AD-284 111.
Order from OTS or SLA $1.60 62-33061

Unedited rough draft trans. of Energomashinostroenie (USSR) 1961 [v. 7] no. 8, p. 42-45.

DESCRIPTORS: *Gas turbine blades, Turbine blades, Cooling, Ash, Particles, *Precipitation, Temperature, Aerosols.

Certain ideas are presented concerning the important influence exerted by the thermophoresis effect on the process of precipitation of particles on cooled blades of gas turbines. Experiments on a cooled and an uncooled plate (a blade model) showed that in comparison with other factors this phenomenon exerts the most important influence on the process of precipitation of particles. (Author)

Machine Parts and Mechanisms

LUBRICATING ARRANGEMENT FOR UNILATERALLY LOADED BEARING. [1962] 6p.
Order from K-H $7.50 K-H 8828

Trans. of Swedish patent 71, 289, n.d.

DESCRIPTORS: *Bearings, *Lubrication.

Bavier, Th. von.
FAN IMPELLER. Sep 62 (drawings omitted).
Order from INFOSERV $10.00

Trans. (text only) of German patent 165, 330, 1904.

DESCRIPTORS: Fans, *Impellers, Design.

Bergsträsser, M.
STRESS COEFFICIENTS FOR SPUR GEARS WITH 20° INVOLUTE TEETH (Beanspruchungsbeiwerte für Stirnradgetriebe mit 20° -Evolventenverzahnung). [1962] [19]p. 9 refs.
Available on loan from SLA 62-18793

Trans. of V[erein] D[eutscher] I[ngenieure]. Zeitschrift (West Germany) 1954, v. 96, no. 28, p. 946-950.

DESCRIPTORS: *Gears, Stresses, Deflection, Pressure, Safety, Geometry, Failure (Mechanics).

The geometry of pairs of spur gears of interaxial distance a_v leads to equations for the stress coefficients, most readily expressed in terms of the radii of curvature of the tooth flanks at the points of contact. A natural tooth condition turns out to be that of least maximum flank slip, under which the product of flank pressure and sliding speed at the tip engagement points is likewise a minimum. This mechanical tooth condition, using the standardized tool at a flank angle of $\alpha_0 = 20^\circ$, yields stress coefficients permitting more economical design of gears than is obtained for arbitrary partition of the sum of the profile displacements.

Bourgoin, Maurice-Leon.
BOLT, tr. by G. E. 20 Sep 62, 4p. (figs. omitted)
Order from OTS or SLA $1.10 62-33241

Trans. of French patent 630,718, gr. V, cl. 3, appl. filed 11 Mar 27, pat. granted 29 Aug 27, pub. 8 Dec 27.

DESCRIPTORS: Nuts (Mechanics), Screw threads, *Bolts, Design.

The bolt is essentially characterized in that its shank is provided with two threads, one of which runs clockwise, the other, counterclockwise. Both threads are provided on the same portion of said shank so that they intersect each other. Therefore, the bolt can be used either with a right-handed or with a left-handed nut, or with both types of nuts, screwed on successively. Such a bolt, provided with a double thread, is prevented from coming loose by placing on its shank two nuts, one left-handed and one right-handed, or vice-versa. (Author)

Seelbach, K.
THREADS TODAY. Sep 62.
Order from BISI [illegible]3 10s BISI-2833

Trans. of Werkstattstechnik [und Machinenbau] (Germany) 1962, v. 52 [no. 2] p. 66-71.

DESCRIPTORS: *Screw threads, Standardization.

Manufacturing Equipment and Processes

PROCESS FOR THE MANUFACTURE OF A PLAITED JALOUSIE. [1962] 7p.
Order from K-H $8.75 K-H 9981

Trans. of Swedish patent 104, 202 [1942].

DESCRIPTORS: *Protective coverings, Manufacturing methods.

SOVIET INDUSTRIAL DEVELOPMENT: [SELECTED] TRANSLATIONS ON SOVIET REGIONAL ECONOMY (15). 30 July 62 [28]p. JPRS: 14638.
Order from OTS or SLA $2.60 62-32076

Trans. of Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1962, no. 3, p. 72-76; Kommunist Sovetskoi Latvii (USSR) 1962 [v. 18, no. 5] p. 34-38; Narodnoe Khozyaistvo Uzbekhistana (USSR) 1962 [v. 4] no. 4, p. 72-77; Mashinostroitel' (USSR) 1962, no. 5, p. 24-25.

DESCRIPTORS: *Industrial production, Industrial equipment, Automation, *Cotton, Industry, Conferences, Machines, Instrumentation, Construction, Materials, *Plastics.

Contents:
A review of the standard of technological processes at the Moscow City Sovnarkhoz Enterprises, by V. E. Yanin
In the Kaluzhskii Sovnarkhoz
Specialization, the most important condition of technical progress, by G. Danilenko
The cotton industry and its material and technical base, by A. Trusov
Decisions of the Scientific-Engineering Conference in action, by S. S. Zaslavskii.

SOVIET INDUSTRIAL DEVELOPMENT: [SELECTED] TRANSLATIONS ON SOVIET REGIONAL ECONOMY (16). 21 Aug 62 [19]p. JPRS: 14914.
Order from OTS or SLA $1.60 62-32579

Trans. of Narodnoe Khozyaistvo Uzbekistana (USSR) 1962 [v. 4] no. 1, p. 67-68; Lesnaya Promyshlennost' (USSR) 1962, 21 June, p. 1; Promyshlennost' Armenii (USSR) 1962 [v. 5] no. 6, p. 3-5; Finansy SSSR, 1962 [v. 23] no. 3, p. 47-50.

DESCRIPTORS: *Industrial production, Industrial equipment, Machine tools, Tools, Machine shop practice, *Maintenance tools, *Construction material industry, Industry, Automation, Machines, Economics.

Contents:
Industrial development of the Karakalpak ASSR (interview)
Modern tools for the repair shops, by P. Bykovskii and V. Dorozhko
More mechanization in industrial construction, by E. Seferov
Financing and credit in the modernization of the Moscow industries, by V. Mamonov.

Boos, H.
ROLL DIAMETERS IN FOUR-HIGH REVERSING STANDS FOR HEAVY PLATES. Oct 62.
Order from BISI £4 5s BISI-2884

Trans. of Blech (West Germany) 1961 [v. 8] no. 4, p. 243-247.

DESCRIPTORS: *Rolling mills, *Metal plates, Pressure, Sheets.

Bruma, M[arc].
ELECTROEROSION AND SPARK-MACHINING, PRESENT STATUS AND FUTURE PROSPECTS [Electroerosion et Usinage par Etincelles]. [1962] 16p.
Order from K-H $20.00 K-H 8533

Trans. of Schweizer Archiv [für Angewandte Wissenschaft und Technik] (Switzerland) 1956 [v. 22, no. 1] p. 18-22.
Another trans. is available from SLA mi$2.40, ph$3.30 as 59-17622 [1959] [17]p.

DESCRIPTORS: *Electroerosive machining, *Spark machining, Industrial production.

Ermert, H., Herwig, A., and Mähner, B.
CONTACT-FREE MEASUREMENTS OF PIPES IN HOT BLOOMS USING RADIO-ACTIVE ISOTOPES. Aug 62.
Order from BISI £4 BISI-2768

Trans. of Bänder, Bleche, Rohre (West Germany) 1961 [no. 10] p. 485-491.

DESCRIPTORS: *Pipes, Measurement, Castings, *Radioactive isotopes, Gamma rays.

Grüner, P.
CALCULATION OF COOLING CURVES FOR BAR STOCK ON COOLING BEDS, AND THE SUITABILITY OF VARIOUS DESIGNS OF COOLING BEDS FOR VARIABLE STOCK COMPOSITION AND PROFILE. Sep 62.
Order from BISI £10 BISI-2886

Trans. of Draht (West Germany) 1956, v. 7 [no. 11] p. 419-427 and [no. 12] 473-480.

DESCRIPTORS: *Cooling, Manufacturing methods, Design, Determination, *Steel, Processing.

Sabass, U.
BASIC CONSIDERATIONS ON THE USE OF DATA PROCESSING IN QUALITY CONTROL EXEMPLIFIED IN THE PRODUCTION OF HEAVY PLATE. Aug 62.
Order from BISI £4 BISI-2682

Trans. of Stahl und Eisen (West Germany) 1961, v. 81 [no. 24] p. 1649-1661.

DESCRIPTORS: *Metal plates, Production, *Quality control, *Data processing systems, Sheets.

Vater, M.
REPRESENTATION OF DEFORMATION RATIOS BY FLOW DIAGRAMS AND THEIR PRACTICAL VALUE. Sep 62.
Order from BISI £4 BISI-2970

Trans. of Materialprüfung (West Germany) 1961, v. 3 [no. 5] p. 176-180.

DESCRIPTORS: *Rolling mills, Pipes, Deformation, Statistical analysis.

Transport, Traction and Hoist Facilities

THE ACCOMPLISHMENTS OF THE MARIBOR AUTOMOBILE FACTORY (Uspesi: Tvornica Automobile - Maribor) tr. by Yakopovich. [1959] [4]p. H-2222 A.
Order from OTS or SLA $1.10 59-21102

Trans. of Tehnika (Yugoslavia) 1958 [v. 2, no. 6] p. OB 116-OB 118.

DESCRIPTORS: *Automotive industry, Industrial production, Vehicles, Passenger vehicles, Cargo vehicles, Fuel trucks, Commerce, Transportation, Diesel engines, Air cooled, *Yugoslavia

SOVIET INDUSTRIAL DEVELOPMENT: [SELECTED] TRANSLATIONS ON SOVIET AUTOMOTIVE INDUSTRY NO. 18. 10 July 62 [50]p. JPRS: 14421.
Order from OTS or SLA $4.60 63-13111

Trans. of Za Rulem (USSR) 1961 [v. 19] no. 9, p. 19; no. 10, p. 8-11; no. 12, p. 14-15; 1962 [v. 20] no. 1, p. 14-15.

DESCRIPTORS: *Industrial production, *Automotive industry, *Motorcycles, Design, Conferences,

Contents:
Soviet racing motorcycles, by B. Karmanov
New motorcycle models, by V. Rogozhin
The motorcycle of the near future, by V. Kovalenko
The Conference of Workers of the Motorcycle Industry.

USSR INDUSTRIAL DEVELOPMENT: SOVIET AUTOMOTIVE INDUSTRY NO. 22. 2 Oct 62 [30]p. (figs. omitted). JPRS: 15536.
Order from OTS or SLA $2.60 62-33315

Trans. of Mashinostroitel' (USSR) 1962, no. 3, p. 17-20, 23-24; Mekhanizatsiya i Avtomatizatsiya Prozvodstva (USSR) 1961 [v. 15] no. 11, p. 10-11 and 39-41; Ekonomicheskaya Gazeta (USSR) 1962, no. 22[43] p. 25; no. 25[46] p. 21; no. 26(47) p. 23-25; and from Pravda, Moscow (USSR) 1962, 29 June, p. 3.

DESCRIPTORS: *Industrial production, *Automotive industry, Industrial plants, Transportation, *Bearings, Storage, *Automation, Plating, Cleaning, Machinery

Contents:
Mechanization of lifting-transport operations in assembly process, by A. B. Drannikov
Mechanization and automation of assembly work at the first State bearing plant, by V. I. Narkevich
Mechanization and automation of assembly work at the Gor'kii motor vehicle plant, by S. S. Koltunov
Mechanization of transportation and storage at the motor vehicle plant imeni Likhachev
Mechanization and automation at the Liral'sk motor vehicle plant, by F. F. Kuzyukov
Automation galvanization
More about the Lenkarz, by E. Tumanov
T-30 street-cleaning machine, by A. Arkad'ev
Handcrafts along-side of automatic machines, by I. Seryakov
The Moskvich Automobile (for durability and reliability) by V. Sadovnikov

Bauernstein, B.
CONCERNING THE INITIATION OF FRONT-WHEEL SHIMMYING THROUGH ROAD UNEVENNESSES. [1962] 18p.
Order from K-H $22.50 K-H 9525

Trans. from ATZ [Automobiltechnische Zeitschrift] (Germany) 1959, v. 61, no. 10.
Another trans. is available from SLA mi$2.70, ph$4.80 as 60-14067 [1959] 25p.

DESCRIPTORS: *Vehicle wheels, Vibration, Roads.

For abstract see Technical Translations 3: 589, 1960.

Dehnel, Jacek R., Tarkowski, Andrzej and others.
POLISH MOTOR CARS [SELECTED ARTICLES] tr. by Claudius F. Mayer. [1960] [10]p. H4965.
Order from OTS or SLA $1.10 60-15626

Trans. of Motor (Poland) 1959, v. 7, no. 23, p. 3, 5, and 11.

DESCRIPTORS: *Automotive industry, *Poland, *Passenger vehicles, Production, Design, *Cargo vehicles, Motorcycles, *Vehicles.

Jedraszko, Z.
THE POLISH MOTOR VEHICLE INDUSTRY AT THE 27TH POZNAN FAIR (Polski Przemysl Motoryzacyjny na XXVII Targach Poznanskich) tr. by E. H. [1958] [22]p. (18 figs. omitted). H-1999.
Order from OTS or SLA $2.60 59-11917

Trans. of Technika Motoryzacyjna (Poland) 1958 [v. 8] no. 5 [p. 169-178].

DESCRIPTORS: *Automotive industry, *Poland, *Vehicles, Production, *Cargo vehicles, *Fuel trucks, Design, Transportation, *Passenger vehicles.

Knüppel, Helmut and Wiethoff, Gert.
ELECTRONIC CRANE WEIGHING SCALES FOR USE IN IRON AND STEEL WORKS. [1962] [27]p. 26 refs.
Order from SLA $2.60 62-16854

Trans. of Stahl und Eisen (West Germany) 1960, v. 80 [no. 4] p. 220-233 (Verein Deutscher Eisenhüttenleute (West Germany). [Berichte]-306).

DESCRIPTORS: *Steel industry, *Iron industry, *Balances, *Weighing, *Hoists, Electronic equipment, Design, Costs, Materials, Scheduling, Control.

Kulikov, N. K.
TRACTIONAL BALANCE OF A VEHICLE WITH ALLOWANCE FOR THE SLIPPAGE OF THE DRIVING WHEELS. Dec 60, 9p.
Order from K-H $11.25 K-H 10397

Trans. of Avtomobil'naya Prom[yshlennost'] (USSR) 1959, no. 9, p. 19-20.
Another trans. is available from LC or SLA mi$1.80, ph$1.80 as 61-10310 [1960] 9p.

DESCRIPTORS: Vehicles, *Vehicle wheels, Friction.

For abstract see Technical Translations 5: 251, 1961.

Pasternak, Kazimierz.
FREIGHT CARS AND THEIR REPAIR; SELECTIONS FROM CHAPS. 1 AND 8, tr. by Betty L. Madzelan. [1960] [47]p. (51 illus. omitted). H-4487.
Order from OTS or SLA $4.60 60-21189

Trans. of mono. Wagony Towarowe i Ich Naprawa, Warsaw, 1951; chap. 1, p. 11-13, 17-24 and 36-40; chap. 8, p. 335-341, 351-367, 369-373 and 375-401.

DESCRIPTORS: *Railroad cars, Maintenance.

Rother, Paul.
DEVELOPMENT OF TRAFFIC AND ITS INFLUENCE ON CENT[RALLY] CONTROLLED TRAFFIC SIGNAL INSTALLATIONS [Die Verkehrsentwicklung und ihr Einfluss auf Zentralgestewerte Verkehrssignalanlegen]. [1962] 23p.
Order from K-H $28.75 K-H 9892

Trans. of Polizei Technik Verkehr (West Germany) 1959, no. 5 [p. 1-8].
Another trans. is available from SLA mi$3.00, ph$6.30 as 60-18125 [1960] [31]p.

DESCRIPTORS: *Traffic, Control, *Signal lights, Operation, Effectiveness, Germany.

MATERIALS

Franke, W., tr.
PLASTIC CEMENT CONCRETE, ITS PROPERTIES AND USES. [1962] [7]p.
Order from OTS or SLA $1.10 62-14532

Trans. of Plaste und Kautschuk (Germany) 1961, v. 8, no. 8, p. 427-429 (originally pub. in Stroitel'nye Materialy (USSR) 1960 [v. 6] no. 5, p. 8-9).

DESCRIPTORS: *Cements, *Construction materials industry, Minerals, *Plastics, *Concrete, Additives, Mortar, Mechanical properties, Hardening.

Lamy, Carl Gustav.
INKING DEVICE WITH INK RIBBON ON TYPE BAR WRITING MACHINES AND THE LIKE. Sep 62 (drawings omitted).
Order from INFOSERV $10.00

Trans. (text only) of German patent 603,257, 1934.

DESCRIPTORS: *Typewriters, Ink, *Ink recorders.

Morozov, Yu. F. and Dymchenko, V. A.
THE PROPERTIES AND USE OF METALOCERAMIC PRODUCTS IN MACHINE BUILDING. 20 Sep 62 [20]p. 9 refs. JPRS: 15370.
Order from OTS or SLA $1.60 62-33145

Trans. of Mashinostroenie (USSR) 1962, no. 1, p. 3-8.

DESCRIPTORS: *Machines, *Powder metallurgy, Metals, *Ceramic materials, Bearings, Friction gaskets, Porous filters, Mechanical properties.

Ohm, K. and Luce, E.
ENAMELED COPPER WIRES: ONCE AND NOW. [1962] 8p. (figs. refs. omitted).
Order from SLA $1.10 62-16996

Trans. of Elektro-Post (West Germany) 1955, no. 23, p. 422-425

DESCRIPTORS: *Copper wire, *Enamel coatings, Dielectric properties, Production, Varnishes.

Pyriki, Constantin.
THE QUANTITATIVE CHANGES OF REDUCING MATERIALS AS WELL AS RESINS AND WAXES. [1962] 13p.
Order from K-H $16.25 K-H 3161-c

Trans. of Z[eitschrift f\"ur] Lebensm[ittel]-U[ntersuchung] u[nd] -Forsch[ung] (West Germany) 1954, v. 98, p. 294-301.

DESCRIPTORS: *Materials, *Resins, *Waxes, Quantitative analysis.

Schroder, Heinz.
PACKAGING OF BODIES OF ANY SHAPE WHATEVER [1962] 3p. (3 figs. omitted).
Order from OTS or SLA $1.10 62-14902

Trans. of German patent 820,419, cl. 81c, gr. 27, released 8 Nov 51.

DESCRIPTORS: *Packaging, *Plastics.

The object to be protected is embedded completely or partially in a plastic material which initially was liquid or to be liquefied, for example, polyvinyl chloride emulsion which subsequently changes to a semi-solid, preferably elastic state, or is converted by heat.

Adhesives and Sealants

Cianetti, E. and Corazzi, L.
ON THE DETERMINATION OF THE DRY RESIDUE IN UREA-BASE ADHESIVES (Sulla Determinazione del Residuo Secco negli Adhesivi a Base Ureica). [1962] [14]p. (figs. omitted).
Order from SLA $1.60 62-16636

Trans. of Rassegna Chimica [per il Chimico e per l'Industria] (Italy) 1957 [v. 9, no. 3] p. 9-13.

DESCRIPTORS: *Adhesives, *Urea-formaldehyde resins, Dehydration, Temperature, Reagents, Electrostatic precipitation.

A series of experiments has been carried out in an effort to discover a method for the most exact determination possible of the dry residue (understood as residue aliquod after elimination of the water used only as a dispersing means) of adhesives with ureic base. Such experiments have been carried out by means of drying at different temperatures or by means of precipitation of the resin with various reagents. From the body of information gathered from an adhesive whose content in water (as dispersing means) was known, a method has come forth capable of giving absolute results and no longer dependent on conventional methods. (Author)

Komematsu, N.
WATER-PROOF CIGARETTE BINDING AGENT. [1958] 3p. MDF K-185.
Order from OTS $0.50 62-11310

Trans. of Japanese Patent, Appl. No. Sho 27-8732. 5 June 52; Publ. No. Sho 29-1493, 20 Mar 54. Applicant: Japan Monopoly Corp.

DESCRIPTORS: *Moistureproofing, Mildew, Packaging, *Adhesives, *Cigarettes, Paper, Plastics, Vinyl radicals, Acetates, Vinyl alcohol, *Fungus proofing.

A waterproof glue for the packing of cigarettes is made by combining approximately equal amounts of emulsified polyvinyl acetate solution and concentrated aqueous solution of polyvinyl alcohol. The product is water-proof and makes possible the mildewproof and moistureproof packaging of small cigarette boxes at room temperature.

Poncet, Pierre.
IMPROVEMENTS IN RIGID GASKETS, tr. by F. H. B. 12 Apr 62, 9p. (8 figs. omitted).
Order from OTS or SLA $1.10 62-24508

Trans. of French patent 1,105,990, gr. 5, internat. cl. F 06/1, appl. 9 June 54, granted 13 July 55, pub. 9 Dec 55.

DESCRIPTORS: *Gaskets, Materials, Temperature, Deformation, Pipes, Joints, Seals, Mounting brackets.

Ceramics and Refractories

IMPROVEMENTS APPLIED TO THE PROCESSES AND DEVICES FOR MANUFACTURING DRINKING GLASSES, DRINKING CUPS AND OTHER CONTAINERS OF GLASS OF SIMILAR SHAPE. [1962] 13p.
Order from OTS or SLA $1.60 62-18147

Trans. of French patent 718140, gr. 13, cl. 3, by Verreries Veuve Marquot et Fils, appl. filed 4 June 31, granted 27 Oct 31, issued 19 Jan 32 (priority claimed for Belgium 5 June 30, appl. for main patent and 25 July 30, appl. for add. patent).

DESCRIPTORS: *Glass, *Containers, Configuration, Manufacturing methods.

Baier, Ernst, Schefer, Werner, and Steinwehr Helmut Ernst v.
CONCERNING THE COLORATION OF BORAX GLASSES BY IRON (Uber die Färbung von Boraxgläsern durch Eisen). [1962] [15] p. (foreign text included) 15 refs.
Order from SLA $1.60 62-14863

Trans. of Glastechn[ische] Ber[ichte] (West Germany) 1956, v. 29, no. 6, p. 247-251.

DESCRIPTORS: *Glass, *Borax, *Iron, *Color, Spectrographic analysis.

The authors were able by metal-addition to obtain pure ferro-borax glasses, and to demonstrate their ferri-freedom chemically and optically. Production and testing are described, and some spectral permeability curves are reproduced. The visual color of the pure ferro-glasses was blue. (Author)

Banerjee, Bhupati Kumar.
THE STUDY OF IRON CONTAINING GLASSES USING X-RAYS (Untersuchung Eisenhaltiger Gläser mit Röntgenstrahlen). [1962] [9]p. (foreign text included) 9 refs.
Order from SLA $1.10 62-16135

Trans. of Glastechn[ische] Ber[ichte] (West Germany) 1960, v. 33, no. 2, p. 45-47.

DESCRIPTORS: *Glass, *Iron, X-ray diffraction analysis, Alkali metal compounds, Borates, Microstructure.

Several interesting results from a study of iron containing glasses using X-ray diffraction photographs are given. Studied were the alakli borate glasses and devitrified test samples. The X-ray study could give no proof for the assumption that, in addition to the various states possible of the iron in the glass, colloidal iron oxide is present. Several other observations regarding the way iron occurs in the glass structure are given. (Author)

Furuuchi, Shigemasa.
EFFECT OF GRAINS SIZE COMBINATION OF RAW MATERIALS AND MELTING TEMPERATURE UPON HOMOGENEITY OF SODA-LIME GLASS (ON THE MECHANISM OF "MELTING SEGREGATION") Pt. 3 of Study of the Homogenizing Process of Molten Glass by Centrifugal Density Spread Technique. [1962] [19]p. (foreign text included) 11 refs.
Order from SLA $1.60 62-10963

Trans. of [Asahi Garasu Kenkyu Hokoku (Japan) 1959, v. 9, p. 36-43].

DESCRIPTORS: Mixtures, Sodium compounds, Calcium compounds, Oxides, Silica compounds, Particles, Separation, Melting, Temperature, *Glass

With the constant grain size of the sand and the constant melting temperature, the minimum density spread was obtained when the grain sizes of all the batch materials are equal. Moreover, homogeneity improved as the grain size of the batch materials decreased. When the grain sizes of the sand and of other batch materials are not equal, the homogeneity is affected by the above-mentioned two factors intricately. Further, except coarse grains (60 ~ 80 mesh), the density spread of the glass decreased with melting temperature when the grain sizes of the batch materials remain equal, while the minimum was attained at a certain temperature in relation with the grain size combinations of the batch materials. This phenomenon was discussed and attributed to the melting segregation viz., the segregation of the raw materials during melting especially caused by the decrease of frictional forces between grains by rapid gas evolution. (Author)

Gailhbaud, J.
HEAT BALANCE OF A GLASS-MELTING FURNACE AND RECENT DEVELOPMENTS (Bilan Thermique d'un Four de Verrerie et Développements Récents). [1962] [21]p. (foreign text included) 10 refs.
Order from SLA $1.60 62-10931

Trans. of Glastechn[ische] Ber[ichte] (West Germany) 1959, v. 32K, p. II/49-II/53.

DESCRIPTORS: *Glass, *Melting, *Heat transfer, Design, Fuel consumption, Economics, Heat exchangers

Kröger, Carl and Eligehausen, Hans.
THE THERMAL CONDUCTIVITY OF THE MELTING GLASS BATCH. [1962] 23p. (16 figs. omitted) 16 refs.
Order from SLA $2.60 62-14244

Trans. of Glastechnische Berichte (West Germany) 1959, v. 32, no. 9, p. 362-373.

DESCRIPTORS: *Glass, Melting, *Thermal conductivity, Manufacturing methods.

Levchenko, M. I. and Vinogradov, N. A.
MACHINE FOR THE CUTTING OF ROUNDED GLASS (Stanok dlya Rezki Kruglykh Stekol). [1962] [5]p. (foreign text included).
Order from OTS or SLA $1.10 62-14591

Trans. of #Steklo i Keramika (USSR) 1957, v. 14, no. 8 p. 22-23.

DESCRIPTORS: *Glass, *Cutting tools, Machines, *Electric machinery.

Nestler, A.
MODERN GLASS-WORKING MACHINES [OF] THE NATIONALIZED GLASS MACHINE CONSTRUCTION (Neuzeitliche Glasverarbeitungsmaschinen des Volkseigenen Glasmaschinenbaues). [1962] [6]p. (foreign text included).
Order from SLA $1.10 62-16624

Trans. of Silikat Technik (East Germany) 1957, v. 8, no. 8, p. 343-344.

DESCRIPTORS: *Glass, Manufacturing methods, Machines, Construction, Electric machinery, Containers.

Rey, Marcel and Kostomaroff, Victor.
CERAMIC COMPOSITION. [1955] 2p.
Order from OTS or SLA $1.10 62-16401

Trans. of French patent 1 035 259, gr. 13, cl. 2, by Société d'Application de la Ceramique à l'Industrie, appl. 10 Apr 51, issued 15 Apr 53, pub. 20 Aug 53.

DESCRIPTORS: *Ceramic materials, *Corundum, Crystals, Glass, Mechanical properties, Dielectrics

Rötger, Helmut.
ON THE ELASTIC RELAXATION BEHAVIOR OF SIMPLE AND MIXED ALKALI SILICATES AND BORAX (Über das Elastische Relaxationsverhalten von Einfachen und Gemischten Alkali-Silikaten und von Borax). [1962] [23]p. (foreign text included) 24 refs.
Order from SLA $2.60 62-16139

Trans. of Glastechn[ische] Ber[ichte] (West Germany) 1958, v. 31, no. 2, p. 54-60.

DESCRIPTORS: Borax, *Borates, Alkali metal compounds, *Silicates, Silicon compounds, Elasticity, Hysteresis, Temperature, Mixtures, Relaxation time, *Glass, Bonding, *Optical glass.

Two strongly pronounced, elastic hysteresis maxima were always found in the temperature range from -180° to plus 300°C with lithium, sodium and potassium silicates and their mixtures. The activation energies of the two groups are determined from their displacement at different relaxation measuring times. On the basis of energy and structure considerations, the hypothesis is set up that in the looser group there is involved the transposition of alkali ions (R^+), in the more firmly bound group the transposition of the neutral oxide R_2O, that is a "spacing position transposition". In connection with hysteresis measurements, the bond strength in silicate and borate glasses is discussed.

Fuels, Lubricants, and Hydraulic Fluids

Dobrowolski, M., Gajda, J., and Gostkowska, H.
STUDY OF THE INFLUENCE OF THE DEGREE OF CRUSHING AND RAMMING OF THE COAL CHARGE ON COKE QUALITY WHEN SLIGHTLY SINTERED COALS ARE USED, tr. by Gwen Dickinson. Aug 59 [6]p. (8 refs. omitted). Trans. CRL/T. 213; [DSIR LLU] M 1546.
Order from OTS or SLA $1.10 60-23020

Trans. of Koks, Smola, Gaz (Poland) 1956 [v. 1] no. 4, p. 141-143. (French trans. CERCHAR, no. 233-57)

DESCRIPTORS: *Coal, *Coke, Ball mills, Mixtures, Chemical analysis, Rammers, Combustion chambers, Abrasion, Resistance, Degasification, *Sintering, Particles, Quality control.

Giela, Zgigniew.
STABILIZATION OF GASOLINE (Stabilizcja Gazoliny) tr. by E. H. [1959] [10]p. (3 figs. omitted). H-4573.
Order from OTS or SLA $1.10 59-21217

Trans. of Nafta (Poland) 1958 [v. 14] no. 10, p. 273-276.

DESCRIPTORS: *Gasoline, Stabilization, Petroleum, Hydrocarbons, Methanes, Fuels, Natural gas, *Liquefied gases, Chemical industry.

Martynov, V. M. and Kuchinskaya, N. D.
MOISTURE VAPOR TRANSMISSION THROUGH THIN LAYERS OF LUBRICATING GREASES [Proniknovenie Parov Vody Cherez Tonkie Sloi Konsistentnykh Smazok]. [1962] 9p.
Order from ATS $13.00 ATS-52P63R

Trans. of Khim[iya] i Tekhnol[ogiya] Topliv i Masel (USSR) 1958, v. 3, no. 10, p. 64-69.

DESCRIPTORS: *Corrosion research, *Lubricants, *Greases, Water vapor, Penetration.

Shubeko, P. Z.
DEVELOPMENT OF THE CONDITIONS OF THE CONTINUOUS PROCESS OF THE COKING OF COAL IN SEVERAL SUCCESSIVE STAGES. [1962] [32]p. 9 refs. NCB Trans. A. 1957/SEH; [DSIR] NLL M. 3359.
Order from OTS or SLA $3.60 62-24823

Trans. of [Akademiya Nauk SSSR]. Inst[itut] Goryuchikh Iskopaemykh], Trudy, 1959, v. 10, p. 7-44.

DESCRIPTORS: *Coal, *Coke, Processing, Fuels, Temperature, Heating, Metallurgical analysis.

Strakhov, B. V. and Lebedev, V. P.
DETONATION PROPERTIES OF GASEOUS OZONE-OXYGEN MIXTURES ENCLOSED IN METALLIC VESSELS [Vzryvaemost' Ozono-Kislorodnykh Gazoobraznykh Smesei v Metallicheskikh Sosudakh]. Sep 62 [2]p. 1 ref.
Order from ARS in Its Journal, v. 32, no. 9, $3.00

Trans. of Moscow U. Vestnik. Seriya 2: Khimiya (USSR) 1960 [v. 15] no. 4, p. 19-20.
An abstract trans. is available from LC or SLA mi$1.80 ph$1.80 as 61-15668, AID-60-105, 9 Dec, 2p; rough draft trans. is available from OTS or SLA $1.10 as 61-27137, MCL-854, 31 Mar 61 [4]p.

DESCRIPTORS: *Oxygen, *Ozone, *Combustion, Rocket oxidizers.

For abstract see Technical Translations 5: 371, 1961.

Vogel, Karl.
BENZENE INJECTION AND OCTANE NUMBER. [1962] 38p.
Order from K-H $47.50 K-H 5413

Trans. of MTZ [Motortechnische Zeitschrift] (West Germany) 1956, v. 17, no. 9, p. 306-313.

DESCRIPTORS: *Benzenes, Injection, Octanes, *Fuels.

Leather and Textiles

DRIVING AND CONTROL DEVICE OF DOUBLE COUPLER TEXTILE MACHINES FOR STRETCHING FIBERS. [1962] [11]p.
Order from OTS or SLA $1.60 62-16350

Trans. of Belgian patent 594,694 by S.A.R.L. N. Schlumberger & Cie. (priority: France, 11 Sep 59, no. P.V. 804,882).

DESCRIPTORS: *Fibers, *Textiles, *Drawing (Machine processing), Electric machinery, Couplings, Stretchers, Elasticity.

Isakov, N. P.
THE THEORY OF THREAD TENSIONERS (K Voprosu Teorii Natyazhitelei Niti). 22 Aug 61 [9] p. 1 ref.
Order from OTS or SLA $1.10 62-14260

Trans. of Izvest[iya] Vysshikh Ucheb[nykh] Zavedenii. Tekhnol[ogiya] Tekstil'[noi] Prom[yshlennost] (USSR) 1960 [v. 4] no. 3, p. 92-95.

DESCRIPTORS: *Threads, Theory, Textile industry, Stresses, Friction, Motion, Velocity, *Tensile properties, *Tensiometers, Equations of motion.

Orsino, J. A., Herman, D. F., and Bransato, J. J.
COMPOSITION OF POLYOLEFIN CELLULOSE. [1962] 8p.
Order from OTS or SLA $1.10 62-16347

Trans. of Belgian patent 575,559 by National Lead Co., USA, publ. 10 Feb 59 (priority: USA, 11 Feb 58).

DESCRIPTORS: *Synthetic fibers, Polymers, *Ethylenes, *Cellulose, Preparation, Catalysis, Impregnation, Titanium, Zirconium.

Rogovin, Z. A., Rozhanskaya, F. M., and Perepechkin, L. P.
SPINNING OF TRIACETATE STAPLE FIBER. [1962] 8p.
Order from ATS $13.50 ATS-24P63R

Trans. of Khim[icheskie] Volokna (USSR) 1961, no. 1, p. 48-51.

DESCRIPTORS: *Synthetic fibers, *Acetates, Manufacturing methods.

Sporyagina, E. A., Ozernikova, B. I., and Tochilina, L. P.
EFFECT OF THE NUMBER OF SPINNERET HOLES AND THEIR DIAMETER ON THE PHYSICOMECHANICAL CHARACTERISTICS OF CORD FIBER. [1962] 4p.
Order from ATS $5.50 ATS-21P63R

Trans. of Khim[icheskie] Volokna (USSR) 1961, no. 1, p. 68-69.

DESCRIPTORS: *Fibers, *Cordage, Manufacturing methods, Industrial equipment.

Usenko, V. A. and Gulyamova, F. M.
PHYSICOMECHANICAL PROPERTIES OF TRIACETATE FIBER. [1962] 4p.
Order from ATS $6.75 ATS-25P63R

Trans. of Khim[icheskie] Volokna (USSR) 1962, no. 1, p. 74-76.

DESCRIPTORS: *Synthetic fibers, *Acetates, Physical properties, Mechanical properties.

Photographic Materials

PROCESS FOR PRODUCING PRINTING PLATES. [1955] 5p.
Order from OTS or SLA $1.10 62-16374

Trans. of French patent 904,255, by Kalle & Co., Germany, appl. filed 13 May 44, granted 19 Feb 45, pub. 31 Oct 45 (convention dates: 14 Jan and 3 Apr 43).

DESCRIPTORS: *Photographic plates, *Printing, Azo compounds, Porous materials, Oxidation, Photosensitivity.

Anfilov, I. V. and Fridkin, V. M.
THE THEORY OF THE DEVELOPMENT OF A LATENT ELECTROPHOTOGRAPHIC IMAGE [K Teorii Proyavleniya Skrytogo Elektrofotograficheskogo Izobrazheniya]. [1962] 4p.
Order from ATS $6.25 ATS-35P63R

Trans. of Zh[urnal] Nauchn[oi] i Prikl[adnoi] Fotogr-[afii] i Kinematogr[afii] (USSR) 1959, v. 4, no. 1, p. 32-34.
Other translations are available from LC or SLA mi$1.80, ph$1.80 as 60-14000, DSIR NLL M.1574 [1959] 5p. and from OTS or SLA $1.10 as 61-20978 [1961] 5p.

DESCRIPTORS: *Electrophotography, Theory, Dyes, Particles, Dielectrics, Density, Surfaces, Differential equations, Photographic equipment, Chemical analysis.

For abstract see Technical Translations 3: 374, 1960.

Boldebuck, Edith Maude.
THERMOPLASTIC COMPOSITION USED AS PART OF A RECORDING MEDIUM. [1962] 36p.
Order from OTS or SLA $3.60 62-16357

Trans. of Belgian patent 600, 255 by General Electric Co., U S A (priority: USA, filed 15 Feb 60, no. 8587).

DESCRIPTORS: *Photographic recording systems, Coatings, *Thermosetting resins, *Silicones, Preparation, Chemical properties, Physical properties.

The composition consists of a compatible mixture of the following ingredients: (1) an organopolysiloxane in which at least 40% of the organic groups are aryle radicals and (2) an aryl polymer consisting of (a) polyarylen ethers or (b) a polystyrene material, or (c) mixtures of (a) and (b). The organopolysiloxane responds to the following general formula:

$$R_m SiO_{\frac{4-m}{2}}$$

in which m has a value of between 1 and 2.01, R designates a monovalent organic radical, at least 40%, and preferably, at least 75% of the organic radicals being aryl radicals, the remainder being radicals made up of cycloalkyl radicals, aryl, alkyl, haloaryl, alcaryl or arolkyl radicals. (Author)

Plastics

LAMINATES. [1962] [3]p.
Order from OTS or SLA $1.10 62-16337

Trans. of Belgian patent 536, 855 by E. I. DuPont de Nemours & Co., filed for 26 Mar 54 in favor of L. E. Williams, 31 Aug 54 and in favor of J. Hochberg and R. L. Lester, 2 Nov 54.

DESCRIPTORS: *Laminates, Paper, Plastics, Polymers, Resins, Hydrocarbons, Molecular structure, Manufacturing methods.

TESTING METHODS FOR PLASTICS: WORKING CONFERENCE. 6 July 62, 5p. AID rept. 62-96.
Order from OTS or SLA $1.10 62-32102

Review of Plasticheskie Massy (USSR) 1961, no. 12, p. 70; 1962, no. 3, p. 77; no. 4, p. 1-2.

DESCRIPTORS: *Plastics, Test methods, Conferences, Plastic tubing, Polymers, Films, Standardization, Specifications, Chemical analysis, Dielectrics, *Plastics industry, Mechanical properties, Industrial research, Engineering.

Contents:
Improving testing methods for plastics, by L. A. Igonin and others
Engineering-mechanical characteristics of plastics (2 articles).

VIBRATION DAMPING MATERIALS PREPARED FROM MIXTURES OF SUPERPOLYMERS. [1962] [17] p.
Order from OTS or SLA $1.60 62-16352

Trans. of Belgian patent 594,963 by Farbwerke Hoechst Aktiengesellschaft (formerly Meister Lucius & Bruning) publ. 12 Sep 60 (priority: German Federal Republic, filed 11 Sep 59, no. F 29.361 IVb/39b).

DESCRIPTORS: *Polymers, *Vinyl radicals, *Acetates, Preparation, *Vibration isolators, Damping.

Färber, Gerhard.
PROCESS FOR THE PRODUCTION OF CHLORINE-CONTAINING EPOXY RESINS. [1962] 9p. (figs. omitted) 4 refs.
Order from OTS or SLA $1.10 62-16270

Trans. of German patent 1,034,356, cl. 39c 2, internat. cl. c 08 g (D 23551 IVb/39c), by Deutsch Solvay-Werke G. m. b. H., appl. 13 Aug 56, appl. pub. 17 July 58.

DESCRIPTORS: *Epoxy resins, Chlorine, Propanes, Production, Hardening.

Chlorinated 2, 2-bis(4-oxyphenyl)-propane in an alkaline solution is condensed with epichlorhydrin and the chlorinated epoxy condensate obtained in this manner is allowed to set. Use can be made of 2, 2-bis-(4-oxyphenyl)-propane which contains 2 to 8 bound chlorine atoms.

Gäth, R.
SYNTHETIC THERMOPLASTIC MATERIALS. 7 Dec 49, 17p. (table [refs.] omitted).
Order from SLA $1.60 62-16975

Trans. of Kunststoffe (West Germany) 1949 [v. 39, no. 1] p. 1-7.

DESCRIPTORS: *Plastics, *Thermosetting resins, Molecular structure, Aging, Resistance, Temperature, Crystallization, Polymers, Ethylenes, Silicone resins.

Pflaumer.
DEVELOPMENT AND FABRICATION OF MAGNETIC RECORDING TAPES. [15 Dec 55] 19p.
Order from SLA $1.60 62-14029

Trans. of unidentified German language mono. (report) n. p., 19 Sep 45.

DESCRIPTORS: *Magnetic recording systems, *Plastic films, *Magnetic tapes.

Quinn, J. M.
POLYVINYL CHLORIDE FILMS. 20 Feb 59 [32] p.
Order from OTS or SLA $3.60 62-16345

Trans. of Belgian patent specification 567,633 by E. I. Du Pont de Nemours and Co., USA, appl. filed 13 May 58 (priority: USA, appl. 14 May 57).

DESCRIPTORS: *Plastic films, *Vinyl chlorides, Manufacturing methods, Physical properties, Tensile properties.

1. A polyvinyl chloride film containing up to 5% of a plasticizer for polyvinyl chloride is patented, characterized by the fact that the film is oriented in at least one direction and has the property not to shrink more than 10% along the axis of orientation when it is subjected to a temperature of approximately (sic) 30°C for 10 minutes in the relaxed state.

Schenkel, G.
PROCESSES AND MACHINERY LAYOUT FOR PLASTIC FILM PRODUCTION. [1962] 20p.
Order from ATS $25.75 ATS-88P62G

Trans. of Kunststoffe-Plastics (Switzerland) 1960, v. 7, no. 2, p. 179-192.

DESCRIPTORS: *Plastic films, Production, Machines.

Starck, Werner, Winter, Jakob and others.
METHOD FOR THE PRODUCTION OF HARDENED, PHOSPHORUS-CONTAINING SYNTHETIC RESINS. [1962] 7p.
Order from OTS or SLA $1.10 62-16278

Trans. of German patent 1,045,649, cl. 39b 22/10, internat. cl. C 08 g (F 22692 IVb/39b) by Farbwerke Hoechst Aktiengesellschaft, appl. 28 Mar 57, appl. pub. and issued 4 Dec 58, pat. pub. 27 May 59.

DESCRIPTORS: Plastics, *Resins, *Phosphorus, Production, Hardening, Esters, Alcohols, Carboxylic acids..

The method is characterized by the fact that derivatives of phosphoric acid capable of conversion with hydroxyl groups and polyesters possessing hydroxyl groups or multivalent alcohols or, if desired, in the presence of monovalent alcohols and/or monobasic carboxylic acids, mixtures of polycondensation products obtained from multivalent alcohols and multibasic carboxylic acids which contain a minimum of 5 weight % of α,β-unsaturated carboxylic acids and/or alcohols of the allyl type as condensation products are polymerized alone or mixed with other low-molecular compounds containing activated double bonds in which they are soluble, in a manner customary for unsaturated polyesters in the presence of catalysts and in molds.

Rubber and Elastomers

Karsten, E.
ON THE PREPARATION OF RUBBER SOLUTIONS (Über die Herstellung von Gummilösungen). [1962] [6]p. (foreign text included).
Order from SLA $1.10 62-10581

Trans. of Kunstdünger und Leim (Germany) n. d., no. 4, p. 118-120.

DESCRIPTORS: *Rubber, *Solutions, Colloids, Gels, Impregnation, Solvent action, Adhesives, Vulcanization.

Wick, M.
BORON-SILOXANE ELASTOMERS. [1962] [1]p.
Order from SLA $1.10 62-16745

Abstract trans. of German language article from an unidentified source, n. d.

DESCRIPTORS: *Elastomers, *Boron compounds, *Silicones.

Organopolysiloxanes with condensed-in heteroatoms are acquiring increasing importance. Boron-containing dimethylpolysiloxanes, which contain Si-O-B bonds, are known as "bouncing putty". They contain more than 0.5mol% boron, are hydrolysis-sensitive and cannot be reticulated to elastomers. It has been found that heterocondensates of organopolysiloxanes with boric acid and organoboric acids with molecular weights of 100,000 to 600,000 can be reticulated to elastomers when it contains less than 0.5mol% boron. The Si-O-B bond can be demonstrated in the IR spectrum. These elastomers, even in the fully-reticulated state, weld together at room temperature. They are not hydrolysis-sensitive, have good electrical characteristics, also after water storage, and are already finding employment as electro insulating tapes, since the welding-together is fully homogeneous and "hightensiontight". (Report quoted in its entirety).

Wood and Paper

Kozlow, W. H. and Korolewa, N. I.
THE FORMATION MECHANISM OF FUNDAMENTAL PRODUCTS DURING THE THERMAL DECOMPOSITION OF WOOD. [1962] 21p.
Order from K-H $26.25 K-H 12075

Trans. of Wiadomosci Chem[iczne] (Poland) 1960, v. 14, p. 295-309.

DESCRIPTORS: *Wood, Pyrolysis, Decomposition.

Kruml, Jaroslav.
MEASURING THE MOISTURE CONTENT OF WOOD WITH ELECTRIC HYGROMETERS. [1961] [15]p. (6 figs. omitted) 4 refs. AERDL T-1144; RIS E-732.
Order from OTS or SLA $1.60 61-28939

Trans. of Drevo (Czechoslovakia) 1959, v. 14, p. 99-102.
Also available from RIS $25.00 as RIS E-732.

DESCRIPTORS: *Wood, Moisture, Measurement, Errors, Electrical equipment, *Hygrometers.

Maematsu, Rokuro and Shozuki, Kamekawa.
THE FUNDAMENTAL EXPERIMENTS ON THE MANUFACTURE OF NYLON PAPER. Pt. 1 of Studies on the Utilization of Synthetic Fibre. [1960] 11p. (5 figs. omitted) 11 refs.
Order from SLA $1.60

Trans. of Tappi [sic] (Japan) 1958, v. 12, no. 9, p. 607-612.

DESCRIPTORS: *Paper, *Nylon, Manufacturing methods, *Synthetic fibers.

Mantzell, E.
MOISTURE CONTENT AND pH VALUE. Mar 62, 3p. 6 refs.
Order from SLA $1.10 62-16500

Trans. of das Papier (West Germany) 1952, v. 6, no. 7/8, p. 126-127.

DESCRIPTORS: *Paper, Moisture, Hydrogen ion concentration, Test methods.

Wieske, R.
EXAMINATION OF CIGARETTE PAPER WITH THE AID OF THE WEKA PHOTOCELL COLORIMETER. [1962] 7p.
Order from K-H $8.75 K-H 4056 b

Trans. of Wochenblatt für Papierfabrikation (West Germany) 1955, v. 83, no. 21, p. 855-856.

DESCRIPTORS: *Cigarettes, *Paper, Photoelectric cells, *Colorimetric analysis.

MATHEMATICS

Glebov, N. I.
REPRESENTATION OF OPERATORS ON A MEMORY. 13 Sep 62 [11]p. 1 ref. JPRS: 15261.
Order from OTS or SLA $1.60 62-33028

Trans. of Akademiya Nauk SSSR. Doklady, 1962, v. 144, no. 3, p. 516-519.

DESCRIPTORS: Digital computers, Computers, *Programming, *Operators (Mathematics), Groups (Mathematics).

Meller, N. A.
ON THE COMPUTATIONS CONNECTED WITH THE VERIFICATION OF THE RIEMANN HYPOTHESIS (O Vychisleniyakh Svyazannykh s Proverkoi Gipotezy Rimana) tr. by A. Pingell. 22 June 62, 5p. 3 refs. N R L Trans. no. 899.
Order from OTS $0.50 62-11787

Trans. of Akademiya Nauk SSSR. Doklady, 1958, v. 123, no. 2, p. 246-248.

DESCRIPTORS: *Special functions, *Complex numbers, Numbers, Number theory, Numerical analysis.

A description is given of the results of calculations carried out by means of the high-speed machine "Strela at the Computation Center of the Academy of Sciences USSR, and connected with the verification of the Riemann hypothesis concerning the zeros of the function

$$\zeta(s) = \sum_{\nu=1}^{\infty} \nu^{-s}.$$ (Author)

Tekse, Kalman.
SOME PROBLEMS OF INTEGRAL GEOMETRY IN RIEMANN SPACES. 7 Feb 62 [29]p. JPRS: 12373.
Order from OTS or SLA $2.60 62-15943

Trans. of Magyar Tudomanyos Akademia Matematikai es Fizikai Tudomanyok Osztalyanak Kozlemenyei (Hungary) 1961, v. 11, no. 3, p. 289-304.

DESCRIPTORS: *Algebraic topology, Topology, Complex variables, Differential geometry, Geometry.

Teterin, N.
MATHEMATICS AND LIFE. 25 July 62, 1p. AID rept. 62-108.
Order from OTS or SLA $1.10 62-32354

Abstract trans. from Vechernaya Moskva (USSR) 1962, 14 May, p. 4.

DESCRIPTORS: Mathematics, *Applied mathematics, Mathematicians.

Computing Devices

Boltyanskii, V. G.
MODELLING OF LINEAR OPTIMAL HIGH-SPEED OPERATIONS BY USING RELAY CIRCUITS. 31 May 62 [10]p. 5 refs. FTD-TT-62-485.
Order from OTS or SLA $1.10 62-32294

Unedited rough draft trans. of Akademiya Nauk SSSR. Doklady, 1961, v. 139, no. 2, p. 275-278.
Another trans. is available from OTS or SLA $1.10 as 62-13018, JPRS-10606, 16 Oct 61 [8]p.

DESCRIPTORS: *Computers, *Linear systems, *Relays, *Circuits, Models (Simulations), Mathematics.

Kortum, H.
TENDENCIES OF DEVELOPMENT OF THE DIGITAL COMPUTER AUTOMATION (Entwicklungstendenzen der Digitalen Rechenautomatik). 14 June 61 [12]p. (figs. omitted). H 8991; JPRS (R-1668-D).
Order from OTS or SLA $1.60 62-25198

Trans. of die Technik (East Germany) 1960 [v. 15] no. 9, p. 586-592.

DESCRIPTORS: *Digital computers, *Automation, Design, Production, Programming, Classification, *Miniature electronic equipment, Semiconductors, Thermionic converters.

Shiarol, L.
POLIGLOTTI CIBERNETICI (Cybernetical Polyglot Dictionaries), tr. by G. Crino. 10p. CNP-52 (text in Italian).
Order from OTS or ETC $1.55 62-26124

Trans. of Moskva (USSR) 1960, no. 3 [p. 182-186]. Another trans. is available in English from OTS $0.75 in 60-31734, JPRS-3731, 1 Sep 60, 25p.

DESCRIPTORS: *Cybernetics, *Dictionaries.

Veltistov, E.
USSR IMPROVES COMPUTERS. Foreign Developments in Machine Translation and Information Processing no. 108. 19 Oct 62, 22p. JPRS: 15787.
Order from OTS $0.75 62-11784

Trans. of Ogonek (USSR) 1962 [v. 40] no. 36, p. 14-16.

DESCRIPTORS: *Cybernetics, *Digital computers, Computers, Reading machines, Pattern recognition, Training, Control systems, Machine translation.

MECHANICS

Kasimov, B. S. and Zigmund, F. F.
THE RELATIONSHIPS IN FILM FLOW ON A VERTICAL CYLINDRICAL TUBE. [1962] 5p.
Order from ATS $5.50 ATS-25P62R.

Trans. of Inzh[enerno]-Fizicheskii] Zh[urnal] (USSR) 1962, v. 5, no. 4, p. 71-74.

DESCRIPTORS: *Cylindrical bodies, *Fluid flow.

Kerimov, K. A.
DETERMINATION OF A SHOCK DIAGRAM OF EXPANSION FOR LARGE DEFORMATIONS. Sep 62 [4]p. 4 refs.
Order from ARS in Its Journal, v. 32, no. 9, $3.00

Trans. of Akademiya Nauk Azerbaidzhanskoi SSR [Baku]. Izvestiya. [Seriya Fiziko-Matematicheskikh i Tekhnicheskikh Nauk] 1960, no. 3, p. 23-29.

DESCRIPTORS: *Shock waves, Propagation, *Deformation, Plastic flow, Impact shock, Rubber, Statics, Load distribution, *Elasticity, *Plasticity, Continuum mechanics, Mechanics.

Kononenko, V. O.
RESONANCE PROPERTIES OF A CENTRIFUGAL VIBRATOR. [1962] [19]p. 10 refs. C. E. Trans. 2312; [DSIR] NLL M. 4956.
Order from OTS or SLA $1.60 62-25889

Trans. of [Akademiya Nauk SSSR]. Inst[itut] Mashinovedeniya. Trudy, 1958, v. 18, no. 71, p. 22-42.

DESCRIPTORS: *Vibrators, Resonance, Mathematical analysis. Stabilization, Motors, Mechanical properties.

Kornilov, A. P.
INSTRUMENT FOR MEASURING SMALL MECHANICAL DISPLACEMENTS. 7 Mar 60 [9]p. 2 refs. USASIA SC-59kk/59; JPRS: R-456-D.
Order from OTS or SLA $1.10 62-32732

Trans. of #Pribory i Tekhnika Eksperimenta (USSR) 1959, no. 2, p. 128-131.

DESCRIPTORS: Measurement, *Instrumentation, *Mechanics, *Electrostatic capacitance, *Transducers.

An instrument with whose aid it is possible to measure small mechanical displacements $2X10^{-6}$mm by converting them into changes of capacitance has been developed. Measurement of capacitance change is based on the phase method. In combination with specially developed transducers-converters the instrument was successfully used for measuring the diameters of thin wires and the thermal coefficient of linear expansion of small samples. (Author)

Malmeister, A.
THE PROBLEM OF GENERALIZING THE BASIC CONCEPTS OF THE THEORY OF PLASTICITY. 6 July 62 [11]p. 13 refs. FTD-TT-62-381; AD-283 889.
Order from OTS or SLA $1.60 62-32981

Unedited rough draft trans. of Akademiya Nauk Latviiskoi SSR [Riga]. Izvestiya, 1961, no. 2(163) p. 89-93.

DESCRIPTORS: *Plasticity, Theory, Elasticity, Stresses, Deformation, Loading, Surface properties, Plastic flow.

The basic premises of the theory of plasticity of a quasi-isotropic solid were corroborated, at least in the case of materials whose plastic deformations do not depend on the hydrostatic pressure, and which obey the law of simple loading and are linearly strengthened.

A way to broaden the basic concepts of the theory of plasticity was indicated. In addition to using the concepts of the loading path and the flow surface, it was proposed that investigations be carried out using broader concepts, i. e., the concept of the surface stress and its change during the process of loading, and the concept of a function of the local plastic deformations from which the maximum elasticity surface (flow surface) is derived as a particular case. A consideration of the mutual change of two surfaces during the loading process, i. e. of the stress surface and the maximum elasticity surface, makes it possible in principle, for us to solve the problems of complex loading. (Author)

Predvoditelev, A. S., ed.
GAS DYNAMICS AND PHYSICS OF COMBUSTION, tr. by A. Barouch. 1962, 168p. 48 refs. PL-480 NASA; NASA-TT-F-79.
Order from OTS $1.75 62-11030

Trans. of mono. Gazodinamika i Fizika Goreniya, Moscow, 1959 [170p.].

DESCRIPTORS: Gases, Dynamics, *Hydrodynamics, *Aerodynamics, *Combustion, Physics, *Explosions, Explosive gases, Shock waves, Propagation, Friction, Heat transfer, *Supersonic flow, Schlieren photography Gas flow, Temperature, Flames, *Flame propagation, Turbulent flow.

Contents:
Hydrodynamic inhomogeneities in the theory of combustion and explosion, by A. S. Predvoditelev
Propagation of shock waves in the combustion products of hydrogen-oxygen mixtures, by T. V. Bazhenova and L. P. Kayushin
Propagation of waves of finite amplitude generated during the explosion of a gas in a cylindrical vessel of variable volume, by T. V. Bazhenova
The influence of external friction and heat exchange on the motion of an ignition surface and a shock discontinuity in a chemically reactive medium, by P. P. Kayushin
Some properties of supersonic flow, by V. S. Pushkin
Supersonic flow in the region of an angular ledge, by V. P. Ionov
Supersonic flow at different Reynolds numbers in contoured nozzles under conditions of overexpansion, by V. P. Ionov
Measuring the density distribution in a three-dimensional object using the Schlieren method, by T. V. Bazhenova and Z. S. Leont'eva
Experimental investigation of the density distribution in a three-dimensional supersonic jet, by T. V. Bazhenova and others
Thermocouple measurement of the temperature in a high-velocity gas flow, by E. V. Kudryavtsev
Laws describing formation of a flame front in a free jet, by L. N. Khitrin and others
Investigation of the combustion behind a flame front in a turbulent stream, by S. A. Gol'denberg and others
The propagation of a turbulent flame front in the presence of high flow velocities, by L. N. Khitrin and S. A. Gol'denberg.

Seelig, W.
THE PHENOMENON OF "ROTATION TURBULENCE" IN ROTATING TUBES AND CONDUITS. [1962] 8p.
Order from K-H $10.00 K-H 6641 j

Trans. of article from an unidentified source in Berlin-Charlottenburg, n. d.

DESCRIPTORS: *Bodies of revolution, *Rotation, Rotating structures, Hydraulic conduits, *Turbulence

Myursepp, P.
EVALUATING THE CRITICAL LOAD OF A CONE. 7 May 62 [8]p. 2 refs. FTD-TT-62-372.
Order from OTS or SLA $1.10 62-32283

Unedited rough draft trans. of Akademiya Nauk Estonskoi SSSR [Tallinn]. Izvestiya. [Seriya Tekhnicheskikh i Fiziko-Matematicheskikh Nauk] 1961, v. 10, no. 1, p. 28-32.

DESCRIPTORS: *Conical bodies, Load distribution, Determination, Pressure, Elastic shells, Perturbation theory, Deflection, Elasticity

A simple calculation formula is derived for determining the critical load of a circular truncated cone of average length by means of the perturbation method, when the shell is under transverse external pressure linearly distributed along the generatrix of the cone. A formula for the determination of the critical load under uniform external pressure is derived as a special case. (Author)

Savitskii, K. V.
AN INVESTIGATION OF THE DISTRIBUTION OF PERMANENT DEFORMATIONS UNDER FRICTION SURFACES. [1962] 7p.
Order from ATS $13.60 ATS-06P59R

Trans. of mono. Issledovaniya Fiz[iki] Tverdogo Tela, n.p., 1957, p. 107-114.

DESCRIPTORS: *Friction, Surface properties, *Deformation, Distribution.

Unksov, E. P.
ENGINEERING THEORY OF PLASTICITY. 1962, 1v.
Order from Butterworth Inc., 7235 Wisconsin Ave., Washington, 14, D. C. $13.00

Trans. of mono. [Inzhenennaya Teoriya Plastichnosti; Metody Rascheta Usilii Deformirovaniya, Moscow, 1959, 327p.].

DESCRIPTORS: *Plasticity, Theory, Engineering.

Zenchenko, V. P.
LOGIC AND PNEUMATICS. 22 Oct 62 [12]p.
JPRS: 15802.
Order from OTS or SLA $1.60 62-33526

Trans. of Mashinostroitel' (USSR) 1962, no. 6, p. 12-13.

DESCRIPTORS: *Pneumatic devices, Computer logic, *Control systems, Operation.

Pneumatic devices are already in existence which are capable of completing up to two thousand operations per second. (Moreover, high speed actually is not required in solving many problems.) In addition, pneumatic devices are completely free of danger of explosions, and are simple, reliable; they are not affected by dust or vibration; and high skill is not required for tending or repairing them. Therefore, if high speed is not required in performing logical operations, then it is more expedient to use pneumatics rather than electronics. (Extracted)

Zhigulev, V. N.
MAGNETIC BOUNDARY LAYER IN A COMPRESSIBLE FLUID. Nov 62 [3]p. 2 refs.
Order from ARS in Its Journal, v. 32, no. 11, $3.00

Trans. of Zhurnal Prikladnoi Mekhaniki i Tekhnicheskoi Fiziki (USSR) 1960, no. 2, p. 124-127.

DESCRIPTORS: *Fluids, *Compressible flow, Fluid flow, *Boundary layer, *Magnetic fields, Reynolds number, Equations of motion, Partial differential equations, Vector analysis.

Aerodynamics and Pneumatics

Antonov, A. M. and Sidlyar, M. M.
PROBLEM OF DETERMINING THE FORM OF A SHOCK WAVE IN CASE OF DIRECTING A GAS FLOW AROUND THIN BODIES. 12 Apr 62 [10]p. (1 ref. omitted) 1 ref. FTD-TT-62-299.
Order from OTS or SLA $1.10 62-25546

Unedited rough draft trans. of Akademiya Nauk URSR [Kiev]. Dopovidi, 1961, no. 12, p. 1556-1560.

DESCRIPTORS: *Shock waves, *Wedges, Aerodynamic configurations, *Gas flow, Numerical analysis, Differential equations.

In this report is investigated the problem of determining the forms of a shock wave by the given form of the surface of the body around which a gas flow is directed at greater velocities ($16 \leq M \leq 18$). The solution is formed on the basis of subsequent approximations method. In the role of small parameter was taken the relative thickness of the body, with the introduction of additional assumptions on the fact, that boundary conditions can be taken off from shock wave of higher approximation and transferred to a shock wave, determinable by the previous approximation, which also offers the possibility of solving the given problem. The first and second approximations are given by formulas. As an example, confirming the correctness of introducing the above mentioned assumption, is discussed the known problem of flow around a plane wedge. It can be concluded from the calculation, that already the first approximation offers sufficiently satisfactory results. (Author)

Chernyi, G. G.
INTRODUCTION TO HYPERSONIC FLOW, tr. by R. F. Probstein. 1961, 1v.
Order from API

Trans. of mono. [Techeniya Gaza s Bol'shoi Sverkhzvukovoi Skorost'yu, Moscow, 1959, 220p.].

DESCRIPTORS: Aerodynamics, *Hypersonic flow, Fluid flow.

Sedov, L. I.
GLI EFFETTI DINAMICI NEL MOVIMENTO DEI SATELLITI ARTIFICIALI DELLA TERRA (The Dynamic Effects of the Moving of the Artificial Satellites of the Earth) 12p. 9 refs. CNP-54. (text in Italian).
Order from OTS or ETC $1.85 62-26126

Trans. of Iskusstvennye Sputniki Zemli (USSR) [1958] v. 2 [p. 3-9].
Another trans. is available in English on loan from SLA as 62-14003 [1961] 22p.

DESCRIPTORS: *Satellite vehicles, Dynamics.

Sergeev, G. T.
EXTERNAL HEAT AND MASS TRANSFER IN EVAPORATION OF A LIQUID FROM A CAPILLARY-POROUS BODY. 21 May 62 [9]p. 5 refs. FTD-TT-62-329.
Order from OTS or SLA $1.10 62-25832

Unedited rough draft trans. of Inzhenerno-Fizicheskii Zhurnal (USSR) 1961, v. 4, no. 5, p. 33-37.

DESCRIPTORS: *Heat transfer, *Mass transfer, *Capillary tubes, Porous materials, Ceramic materials, *Wind tunnels, Gas flow, Liquids, Evaporation.

An examination is made of external heat and mass transfer in a constant evaporation rate of moisture from the surface of a capillary-porous body under adiabatic conditions. (Author)

Stulov, V. P. and Pavlova, L. M.
BOUNDARY LAYER ON A PLATE TAKING INTO ACCOUNT NONEQUILIBRIUM DISSOCIATION [AND] NONEQUILIBRIUM DISSOCIATING-AIR CURRENTS CLOSE TO EQUILIBRIUM. 22 Aug 62 [24]p. 9 refs. FTD-TT-62-799
Order from OTS or SLA $2.60 62-32941

Unedited rough draft trans. of Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya: Mekhanika i Mashinostroenie, 1961, no 3, p. 5-17.

DESCRIPTORS: *Fluid flow, *Boundry layer, Gases, Dissociation, Thermometers, Heat transfer, Catalysis, Nozzels.

Consideration is given to the flow past a plate of a stream of a viscous compressible gas when dissociation of a diatomic gas and recombination of atoms are possible. The Prandtl number P, the number L and the value μ_ρ are considered to be dependent on the

temperature and the concentration, but change slightly over the whole field of flow. The dissociation rate is such that there is a small deviation of the concentration of atoms from equilibrium. (Stulov) Air currents close to equilibrium are investigated; the method of small perturbations is used. This method enables us to determine the position of the cross sections in which the flow freezes, i. e. those places where the composition of the gas does not change. Beginning with this cross section, the flow may be considered completely frozen. An example is given of the calculation of flow in a conical nozzle with an angle of half-opening of 12°; the temperature and pressure are respectively, 6000°K and 1000 atm. (Pavlova)

Vatazhin, A. B.
FUSION OF A PLATE AROUND WHICH A SUPERSONIC OR HIGH TEMPERATURE GAS STREAM IS DIRECTED. 3 May 62 [13]p. 4 refs. FTD-TT-62-433.
Order from OTS or SLA $1.60 62-32286

Unedited rough draft trans. of Akademiya Nauk SSSR. O[tdelenie] T[ekhnicheskikh] N[auk]. Izvestiya: Mekhanika i Mashinostroenie, 1959, no. 6, p. 7-13.

DESCRIPTORS: Aerodynamic configurations, *Sheets, Melting, *Aerodynamic heating, Sublimation, *Supersonic flow, Gas flow, Heat transfer, Boundary layer, Equations of motion.

Hydrodynamics, Hydraulics, and Hydrostatics

TOWING PULL AND VARIABLE PITCH PROPELLERS, tr. by Linton C. Stevens. June 53 [8]p. 2 refs. STS-286; Bureau of Ships Translation 656.
Order from OTS or SLA $1.10 59-16028

Trans. of unidentified typescript mono. La Traction en Remorque et les Propulseurs à Pas Réglable.

DESCRIPTORS: *Variable pitch propellers, Marine propellers, Boats, Recovery vehicles.

Kapitsa, P. L.
FREE FLOW [Volnovoe Techenie Tonkikh Sloev Vyazkoi Zhi dhosti. I. Svobodnoe Techenie]. Pt. 1 of Wave Flow of Thin Layers of a Viscous Liquid. [1962] 16p.
Order from ATS $27.50 ATS-85P62R

Trans. of Zh[urnal] Eksperim[ental'noi] i Teor[eticheskoi] Fiz[iki] (USSR) 1948, v. 18, no. 1, p. 3-18.
Other translations are available from OTS or SLA $2.60 in 61-23317; DSIR LLU M. 2751 [1961] 23p.; $1.60 in 61-27621, DSIR LLU M. 3249; $1.60 as 62-13142; DSIR NLL M. 4296, Sep 60, 15p.; also available from INSDOC as T. 832 (a).

DESCRIPTORS: Liquids, Viscosity, *Fluid flow, Wave transmission.

METALLURGY

METALLURGY, METALS, METAL PRODUCTS, AND NONMETALLIC MINERALS, NO. 4, P. 127-170 Series 3 of English Abstracts of Selected Articles from Soviet Bloc and Mainland China Technical Journals. May 61, 1v.
Order from OTS $18.00/6 issues 61-11142-4
foreign $22.50/6 issues

DESCRIPTORS: Scientific reports, *Metallurgy, *Steel industry, *Iron industry, Minerals, Metals, Abstracts, *China, *Machine tools, *Chemical elements.

Consists of Abstracts in English.

METHOD FOR THE TREATMENT OF METALLIC OBJECTS BY MEANS OF IMMERSION IN A BATH WHICH CONSISTS PRINCIPALLY OF MOLTEN ALUMINUM. [1962] 3p.
Order from K-H $3.75 K-H 6600-a

Trans. of Dutch patent 10, 555, n. d.

DESCRIPTORS: *Aluminum, Melting, Liquid metals, Metallurgy, Metals.

SOVIET INDUSTRIAL DEVELOPMENT: SELECTED TRANSLATIONS NO. 44. 1 May 61, 16p. JPRS: 9197.
Order from OTS $0.50 61-21645

Trans. of Kommunist Sovetskoi Latvii (USSR) 1960 [v. 16] no. 10, p. 12-15 and from [Nauchno-Tekhnicheskie Obshchestva SSSR, 1961, v. 3, no. 2].

DESCRIPTORS: *Industrial production, Industrial equipment, *Open hearth furnaces, Furnaces, *Rolling mills, *Powder metallurgy, Metallurgy, Machining.

Contents:
Master new technology more quickly, by M. Kabo
Machine parts from (metal) powder.

TRANSLATIONS ON SOVIET METALLURGY. 5 Sep 62 [39]p. JPRS: 15100.
Order from OTS or SLA $3.60 62-32703

Trans. of Metallurgicheskaya i Gornorudnaya Promyshlennost' (USSR) 1962, no. 1[13] p. 3-4, 58-60, 67-68; no. 2[14] p. 19-23, 48-51; no. 3[15] p. 3-6.

DESCRIPTORS: *Metallurgy, *Industrial production, *Mining engineering, *Manganese, *Ores, Scientific research, *Rolling mills, Industrial plants, *Iron, Rock

Contents:
Metallurgical and mining industry of the Soviet Ukraine in the fourth year of the Seven-Year Plan
Development of manganese ore extraction in the Ukrainian SSR, by I. D. Tarakhtii

Scientific research projects in 1961
Specialization of rolling mills and mastery of the new economical rolled shapes at plants of the Ukrainian SSR, by L. V. Shapiro and V. E. Svets
Prospects for the development of the Kerch ore base, by N. S. Dovzhik and P. A. Tatsienko
Agglomerate production in the Ukrainian SSR in the first three years of the Seven-Year Plan, by N. E. Sidorov

THE USE OF ZIRCONIUM AND ITS COMPOUNDS IN INDUSTRY. 29 Oct 62 [113]p. 61 refs.
JPRS: 15907.
Order from OTS or SLA $9.60 62-33673

Trans. of mono. Primenenie Tsirkoniya i Ego Soedinenii v Promyshlennosti, Kiev, 1962, 100p.

DESCRIPTORS: *Zirconium, *Zirconium compounds, *Zirconium alloys, Physical properties, Chemical properties, Refractory materials, Metallurgy, Steel, Castings, Paints, Capacitors, Enamel coatings, Industrial production.

Contents:
Basic physicochemical properties of zirconium, its compounds and alloys, by G. V. Samsonov
Use of zirconium and its compounds in the production of hard and refractory alloys, by M. S. Koval'chenko
Producing alloys of zirconium for ferrous metallurgy, by V. A. Bogolyubov and V. A. Shushlebin
Zirconium in construction steel, by G. A. Torpanova
Use of zirconium in the electrovacuum industry, by N. V. Grigor'ev
Use of casting materials based on zirconium mixtures and paints, by A. N. Tsibrik
Technology of manufacturing forms and cores using zirconium mixtures, pastes, paints, and parting media, by A. N. Tsibrik
Use of foundry paint based on zircon in casting production, by I. A. Krivosheev
Technico-economic indices of casting production using zirconium-coated casting forms, by M. Averchenkov
Use of zirconium dioxide in the production of electrocondensers, by O. E. Zhuk
Fields and possible levels for the use of Zirconium-containing refractories, by M. A. Lur'e
Use of zirconium raw material in the production of electrosmelting refractories for the glass industry, by N. M. Galdina and Yu. S. Yanovskii
Use of zirconium compounds in the production of enameled dishes, by G. I. Belyaev and Yu. T. Barinov.

Amosov, V. M.
DUCTILE NIOBIUM PRODUCTION FROM ELECTROLYTIC POWDERS. 6 Nov 62 [23]p. 16 refs.
JPRS: 16063.
Order from OTS or SLA $2.60 62-33684

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Tsvetnaya Metallurgiya (USSR) 1962 [v. 5] no. 4, p. 122-131.

DESCRIPTORS: *Powder metallurgy, Electrolytes, *Niobium, Production, Purification, Ductility, Vacuum furnaces.

Several questions dealing with the production of niobium from electrolytic powders have been discussed. Special attention in this connection was paid to an examination of the high-temperature processes for refining niobium in a vacuum. (Author)

Balandin, G. F. and Silin, L. L.
ROLE OF FRICTION IN ULTRASONIC WELDING (O Roli Treniya pri Svarke Ul'trazvukom). Nov 62 [3]p. 7 refs.
Order from ARS in Its Journal, v. 32, no. 11, $3.00

Trans. of Akademiya Nauk SSSR. Otdel[enie] Tekh[nicheskikh] Nauk. Izvestiya: Metallurgiya i Toplivo, 1960, no. 6, p. 42-46.
Another trans. is available from OTS or SLA $1.10 as 61-27440, MCL-1045, 26 June 61 [9]p.

DESCRIPTORS: *Friction, *Ultrasonic equipment, Temperature, *Welding, Ultrasonics, Welded joints, Mechanical properties, Metal joints.

Data are presented on the temperature field distribution in ultrasonic welding.

Bal'shin, M. Yu. and Trofimova, A. A.
THE EFFECT OF LOAD ON THE PROCESS OF ISOTHERMAL SINTERING OF METALLIC POWDERS. Feb 62 [11]p. (Figs. omitted) 5 refs. [DSIR] NLL M. 3638.
Order from OTS or SLA $1.60 62-25307

Trans. of Akad[emiya] Nauk SSSR. Otdel[enie] Tekhn[icheskikh Nauk. Izvest[iya]: Metall[urgiya i] Topl[ivo] 1961, no. 6, p. 45-51.

DESCRIPTORS: *Powder metals, *Sintering, Plasticity, Deformation, High pressure research, Dies, Iron alloys, Copper alloys, Nickel alloys, Creep, Load distribution, *Powder metallurgy.

A study was made of the sintering under pressure of copper, nickel and iron powders of different sizes. The sintering was performed in a special dilatometric apparatus in graphite dies at temperatures and pressures ranging between 2 and 64 kg./cm.^{2}. Pressure was applied after reaching the required temperature (at a rate of heating of about 12 deg. C./min.); the time of isothermal holding was 256 minutes; variations in specimen dimensions were recorded after 1, 2, 4, 8, 16, 32, 62, 128 and 256 minutes holding. The sintering and cooling were performed in a hydrogen atmosphere. (Author)

Beaudier, J., Cabane, G., and Mouturat, P.
STUDY OF $\alpha \rightleftarrows \beta$ PHASE CHANGES IN A LOW URANIUM-CHROMIUM ALLOY. [1962].
Order from FRI FRI Trans-174

Trans. of Rev[ue de] Métallurg[ie]. Mémoires Scientifiques (France) 1961, v. 58, no. 3, p. 176-182.
Another trans. is available from SLA $1.60 as 62-16233 [1962] [15]p.

DESCRIPTORS: *Uranium alloys, *Chromium alloys, Transformations, Grains (Metallurgy), Single crystals, Reaction kinetics, Crystal structure, Transition temperature, Nuclei.

Bogoiu, E.
ELECTROLYTIC POLISHING OF BEARING BALLS. Sep 62, 1700 words.
Order from HB $5.50 HB-5057

Trans. of Metalurgia [si] Constr[uctia de] Masini (Rumania) 1960, v. 12, no. 10, p. 868-870.

DESCRIPTORS: *Ball bearings, *Electrolytic polishing, Surface properties, Production, Statistical analysis, Costs.

Bohm, H.
INVESTIGATION OF PRECIPITATION AND AGEING IN AN Al-Ge ALLOY. [1962].
Order from FRI FRI Trans-175

Trans. of Zeit[schrift] für Metallkunde (West Germany) 1960, v. 51, no. 7, p. 409-413.
Another trans. is available from SLA $1.60 as 62-16599 [1962] [15]p.

DESCRIPTORS: *Aluminum alloys, *Germanium alloys, Precipitation, Aging.

Bohnen, J. K.
RESISTANCE WELDING AND STRETCH-REDUCING PLANT FOR THE PRODUCTION OF THREADED TUBES AND PIPING. Oct 62.
Order from BISI £3 BISI-2976

Trans. of Blech (West Germany) 1961 [v. 8 no. 8, p. 628-632.

DESCRIPTORS: *Industrial plants, *Pipes, *Steel tubing, Manufacturing methods, *Welding.

Burkart, W.
NEW POLISHING TECHNIQUES; IMPROVEMENTS, NEW SUGGESTIONS, ETC. [1962] 4p. (refs. figs. omitted).
Order from SLA $1.10 62-16801

Trans. of Metall (West Germany) 1956, v. 10, no. 1/2, p. 36-38.

DESCRIPTORS: *Grinders, Metal polishes, Manufacturing, Methods.

Calfas, P.
EXTRUSION OF METALS ON THE PRESS. [1962] 8p. (refs. figs. omitted).
Order from SLA $1.10 62-16802

Trans. of le Genie Civil (France) 1943, v. 120, no. 18, p. 205-207.

DESCRIPTORS: *Metal forming presses, Metals, Alloys, *Extrusion, *Machine tools, Plasticity, Deformation

Costa, E.
CONTROLLING AND CORRECTING PLATING SOLUTIONS WITH THE HULL CELL. [1962] 4p.
Order from ATS $5.50 ATS-97P60I

Trans. of Galvanotecnica (Italy) 1951, v. 2, no. 9, p. 199-202.

DESCRIPTORS: Control, *Electroplating solutions, *Electrolytic cells, Cathodes (Electrolytic cells), Test equipment.

Davydov, Y. P.
TECHNOLOGICAL CHARACTERISTICS OF DEEP-DRAWING OF SHEETS FROM HEAT-RESISTING AND TITANIUM ALLOYS. Nov 61 [11]p. (figs. tables omitted). [DSIR NLL] M. 3654.
Order from OTS or SLA $1.60 62-25299

Trans. of mono. Obrab[otka] Zharoproch[nykh] Splavov [The Working of Heat-Resisting Alloys, Moscow] 1960, p. 67-74.

DESCRIPTORS: *Titanium alloys, Heat resistant alloys *Sheets, Drawing (Machine processing), Alloys, mechanical properties, *Steel.

Dickenschied, W. and Seemann, H. J.
MINIATURE TENSILE TESTS TO STUDY THE PRESS EFFECT IN COLD- AND WARM-AGED ALUMINIUM-COPPER-MAGNESIUM ALLOYS. [1961]. F. R. I. Trans. no. 146.
Order from FRI FRI Trans-146

Trans. of Z[eitschrift für] Metallk[un]de (West Germany) 1958, v. 49 [no. 10] p. 527-532.
Another translation is available from SLA mi$2.40, ph$3.30 as 61-10806 [1961] [21]p.

DESCRIPTORS: *Aluminum alloys, *Copper alloys, *Magnesium alloys, Alloys, Aging, Tensile properties, Test methods, Metallurgy.

Engelhardt, W.
CLADDING. 23 Nov 49, 23p. (figs. refs. omitted).
Order from SLA $2.60 62-16995

Trans. of die Technik (Germany) 1948, v. 3, no. 9, p. 381-386 and no. 11, p. 473-475.

DESCRIPTORS: Metals, *Protective coverings, Manufacturing methods, Bonding, *Brass, *Bronze, *Copper, Carbon, Oxides.

Formichev, A. F.
MOLTEN-METAL PRESSING WITH THE USE OF ONE PIECE DIES. Aug 62, 800 words.
Order from HB $2.80 HB-5364

Trans. of Liteinoe Proizvodstvo (USSR) 1952, no. 3, p. 9-10.

DESCRIPTORS: *Dies, *Castings, *Fused materials, Metal-forming presses, Liquid metals.

Galmiche, P.
PROTECTION OF METALS BY DIFFUSION OF CHROMIUM. [1962] 2p. (figs. omitted) 5 refs.
Order from SLA $1.10 62-16972

Trans. of [Academic des Sciences, Paris]. Comptes Rendus (France) 1950 [v. 230] 2 Jan, p. 89-91.
Another trans. is available on loan from SLA as 57-2643, 3p.

DESCRIPTORS: *Chromium, *Diffusion, *Metals, *Chromizing, Chromium plating, Vapors, Electrolytic polishing, Corrosion inhibition, Thermal stresses, Bonding.

Gasse, W.
RECENT EXPERIENCE WITH FUEL BURNERS. Oct 62.
Order from BISI £ 5 10s BISI-2983

Trans. of Stahl und Eisen (West Germany) 1961, v. 81 [no. 21] p. 1397-1403.

DESCRIPTORS: *Oil burners, *Furnaces, *Fuels, Consumption, Temperature control, Melting, Flames, Atomization, Pusher furnaces, Open hearth furnaces.

Gebhardt, E. and Winkhardt, G.
ELECTROLYTIC POLISHING. [1962] 24p. (tables, refs. omitted).
Order from SLA $2.60 62-16976

Trans. of [ETZ Elektrotechnische Zeitschrift. Ausgabe B]. der Elektrotechniker (Germany) 1952, v. 4, no. 1, p. 1-8.

DESCRIPTORS: *Electrolytic polishing, Electrochemistry, Manufacturing methods.

Gerber, E.
USE OF HULL CELL FOR TESTING AND CONTROL OF ELECTROPLATING SOLUTIONS. [1962] 4p. (table figs. refs. omitted).
Order from SLA $1.10 62-16978

Trans. of Metalloberfläche (West Germany) 1954, v. 6, no. 4, p. B51-B53.

DESCRIPTORS: *Electroplating solutions, Test equipment, Control, *Electrolytic cells.

Gorelik, S. S. and others.
CAUSES OF CRACKING DURING THE FORGING OF BARS. Sep 62.
Order from HB $2.00 HB-5488

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 9, p. 17-19.

DESCRIPTORS: *Forging, *Rods, *Fracture (Mechanics), Plasticity.

Heynert, Gerhard, Toussaint, Friedrich Jr., and others.
THE DISTRIBUTION AND METHODS OF AFFECTING THE DISTRIBUTION OF BLAST FURNACE CHARGES. [1960] [22]p. 31 refs.
Order from SLA $2.60 62-16873

Trans. of Stahl und Eisen (West Germany) 1960, v. 80, no. 8, p. 473-483 (V[erein] D[eutscher] E[isenhütten-leute] (West Germany). [Berichte]-331).
Another trans. is available from BISI 7 5s as BISI-1716 [1960].

DESCRIPTORS: *Blast furnaces, Coke, Ores, Model tests, Temperature, Economics, Gas flow.

Hinnüber, J. and Kinna, W.
HARD METALS TECHNOLOGY AND RESEARCH. [1962] [10]p.
Order from SLA $1.10 62-16910

Partial trans. (p. 146-148 and 150-152) of Technische Mitteilungen Krupp (West Germany) 1961, v. 19, no. 3, p. 130-153.

DESCRIPTORS: *Metals, Friction, Machining, Alloys, *Cutting tools, *Ceramic materials, Clamps, Carbides, *Sintered alloys, *Powder metallurgy, Electron microscopy, *Carbide tools, Milling machines, Steel, Cobalt alloys, Tungsten alloys, Carbon.

Contents:
Wear of hard metal by machining
Development of alloys
  Hard metals for machining
  Ceramic cutters
Application technique
  Clamps for turning inserts

Klopfert, A.
NEW METHODS OF FLASH-BUTT WELDING OF ALUMINUM ALLOYS. [1962] 10p. (tables, figs. refs. omitted).
Order from SLA $1.10 62-16957

Trans. of Aluminium (Germany) 1955, v. 31, no. 6, p. 260-266.

DESCRIPTORS: *Aluminum alloys, *Welding, *Flash welds, Welded joints, *Electric welding, Transparent panels

Krichmar, S. I.
POLARIZATION MECHANISM OF SMOOTHING IN THE ELECTROCHEMICAL FINISHING OF METALS [Polyarizatsionnyi Mekhanizm Sglazhivaniya pri Elektrokhimicheskoi Polirovke Metallov]. [6]p. 5 refs.
MDF K-151.
Order from OTS $0.50 62-11216

Trans. of A[kademiya] N[auk] SSSR. Doklady, 1955, v. 100, no. 3, p. 481-484.
Another trans. is available from SLA as R-4378.

DESCRIPTORS: *Metals, *Cleaning, Electrodes, Polarization, *Electrolytic polishing,

The degree of smoothing of the surface with time was computed based on the polarization representations. The polarization mechanism encompasses a region of smoothing of irregularity of the order of several microns and more.

Kroll, Wilhelm.
ALLOYS OF DEFORMABLE CHROMIUM, tr. by J. B. 9 June 61, 8p. (12 figs. omitted) 2 refs.
Order from OTS or SLA $1.10 61-23995

Trans. of Zeitschrift für Metallkunde (Germany) 1936, v. 23, no. 10, p. 317-319.

DESCRIPTORS: Chromium, *Chromium alloys, Metals, Alloys, Iron, Nickel, Deterioration, Metallurgical analysis, Microstructure, *Deformation.

Mitrofanov, S. I., Melik-Stepanov, Yu. G. and others.
PROVE PER L'ARRICCHIMENTO DI MINERALI SU UN CANALE OSCILLANTE (Enrichment of Ores by Means of an Oscillating Pipe) 10p. CNP-17. (text in Italian).
Order from OTS or ETC $1.55 62-26096

Trans. of #Tsvetnye Metally (USSR) 1960 [v. 33] no. 1 [p. 17-22].

DESCRIPTORS: *Ores, Pipes, *Oscillation.

Modl, E. K.
GAS FLUSHING AND INJECTION TECHNIQUES IN FOUNDRY PRACTICE. Aug 62, 5800 words.
Order from HB $16.50 HB-5623

Trans. of Giesserei (West Germany) 1961, v. 48, no. 21, p. 639-647.

DESCRIPTORS: *Foundries, Cast iron, *Gases, Injection, Metallurgy, Iron, *Fluidized solids.

Moleva, M. G. and Kusakin, P. S.
COMPOSIZIONE MINERALOGICA DI AGGLOMERATI CONTENENTI UN FONDENTE (Mineralogical Composition of Fluxed Sinters). 15p. 6 refs. CNP-25. (text in Italian).
Order from OTS or ETC $1.85 62-26079

Trans. of Stal' (USSR) 1957, v. 17, no. 12, p. 1068-1071
Another trans. is available in English from HB $6.90 as HB-4142.

DESCRIPTORS: *Sintering, *Oxides, Silicon compounds, Calcium compounds, Iron compounds.

Müller, H. G. and Lueg, W.
CONCLUSIONS FROM ROLLING TRIALS ON A FOUR STAND COLD MILL FOR WIDE STRIP. [1959] [12]p. (figs. omitted) 8 refs.
Order from SLA $1.60 62-10481

Trans. of Stahl und Eisen (West Germany) 1959 [v. 79, no. 6] p. 325-331.
Another trans. is available from BISI as BISI-1306 [1959].

DESCRIPTORS: *Rolling mills, Industrial equipment, Control systems, Scheduling, Roller bearings, Friction, Lubrication.

Discussions are presented on: (1) the effect of altering the rolling speed on strip thickness, roll force and strip tension in the individual stands; (2) theoretical explanation of variations in thickness by altering the coefficient of friction, displacing the roll necks in the back-up roll bearings, altering the tension and resetting the rolls; (3) the distribution of the roll force between the individual stands; (4) effect of the layout of the drives on the utilization of final rolling speed for different rolling schedules; (5) effect of variations of certain characteristics and of motor load on automatic compensation of variations in the thickness of the hot rolled strip; and (6) the possibilities and limitations of controlling the final strip thickness on high speed multi-stand cold mills.

Nadachowski, F.
NEW SUGGESTIONS FOR THE LINING OF BASIC OXYGEN (LD) FURNACES. Sep 62, 3500 words.
Order from HB $12.20 HB-5704

Trans. of Hutnik (Poland) [1961] v. 28, no. 4, p. 143-147.

DESCRIPTORS: *Combustion chamber liners, *Blast furnaces, Steel industry, Magnesite, Dolomite, *Oxygen.

Palme, R.
PROCEEDINGS IN SINTERING METALLIC INDUSTRIAL MATERIALS [Die Vorgange bei der Sinterung Metallischer Werkstoffe]. [1962] 7p.
Order from K-H $8.75 K-H 8706

Trans. of Metall (West Germany) 1957, v. 11, no. 1, p. 8-9.
Another trans. is available from SLA mi$1.80, ph$1.80 as 59-17625 [1959] [9]p.

DESCRIPTORS: Metals, *Powder metals, *Sintering.

For abstract see Technical Translations 2:677, 1959.

Ploger, Ulrich.
DETERMINATION OF SURFACE TEMPERATURES BY MEANS OF INFRARED PHOTOGRAPHS. Feb 61, 12p.
Order from K-H $15.00 K-H 2068

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1960, v. 31, no. 2, p. 87-90.
Another trans. is available from SLA $1.60 as 61-10546 [1961] [16]p.

DESCRIPTORS: *Open hearth furnaces, Roofs, Surface temperatures, Determination, *Infrared photography.

For abstract see Technical Translations 6: 444, 1961.

Podgaetskii, V. V.
THE INFLUENCE OF FLUX ON THE FORMATION OF A WELDED SEAM. Oct 62.
Order from BISI £5 15s BISI-2613

Trans. of #Avtomaticheskaya Svarka (USSR) 1961 [v. 14] no. 1, p. 26-42.

DESCRIPTORS: *Welding, Welded joints, *Welding fluxes, Viscosity, Chemical properties, Grains (Metallurgy), Crystallization, Surface properties, Silicates.

Podzeya, A. V.
INVESTIGATING PHYSICO-MECHANICAL AND OPERATIONAL PROPERTIES OF DETAILS AFTER MACHINING. 12 July 62 [19]p. (5 refs. omitted) 1 ref. FTD-TT-62-575; AD 283 863.
Order from OTS or SLA $1.60 62-32697

Unedited rough draft trans. of Aviatsionnyi Institut, Moscow. Trudy (USSR) 1960, v. 129, p. 100-111.

DESCRIPTORS: *Machining, *Heat resistant alloys, *Nickel alloys, *Titanium alloys, Mechanical properties, Deformation, Forging, Processing, Heat treatment, *Titanium castings, Casting, Molding, Production, Quality control, Test equipment, Fatigue (Mechanics).

Polukhin, P. I., Osadchii, V. Ya. and others.
AN EXPERIMENTAL INVESTIGATION INTO THE PIERCING PROCESS. Oct 62.
Order from BISI £4 5s BISI-2997

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Chernaya Metallurgiya (USSR) 1961, no. 7, p. 88-96.

DESCRIPTORS: *Milling machines, *Drilling machines, Manufacturing methods.

Raguin, J.
RECARBURISATION BY INJECTION OF POWDERS: A SUMMARY OF THE RESULTS OBTAINED BY IRSID. Sep 62.
Order from BISI £6 15s 6d BISI-2917

Trans. of Revue de Métallurgie (France) 1962, v. 59 [no. 2] p. 93-109.

DESCRIPTORS: *Carbon, *Powders, Injection, Manganese, Silicon, Phosphorus, Sulfur, Iron.

Raspopov, I. V., Kulikov, Ya. P., and others
FUSIONE IN ALTOFORNO DI AGGLOMERATO PREPARATO CON MINERALE DI KRIVO ROG CON IL FONDENTE INCORPORATO (Blast Furnace Practic with the Use of Krivoi Rog Fluxed Sinter). 19p. CNP-21. (text in Italian).
Order from OTS or ETC $1.85 62-26075

Trans. of Stal' (USSR) 1957 [v. 17] no. 2, p. 99-103.
Another trans. is available in English from OTS or SLA $1.10 as 62-24134, BISI-681, Sep 57 [9]p.

DESCRIPTORS: Blast furnaces, *Sintering, *Iron compounds, Oxides.

Reinfeld, H.
RECENT DEVELOPMENTS IN THE STÜRZELBERG IRON REDUCTION PROCESS. [1960] [18]p. 3 refs.
Order from SLA $1.60 62-16870

Trans. of Radex-Rundschau (Austria) 1951, no. 5, p. 178-187.
Another trans. is available from BISI £5 15s as BISI-1597 [1960].

DESCRIPTORS: *Slags, Processing, *Zinc, Recovery, *Iron, *Liquid metals, Production.

Ristow, A.
LD STEELWORKS AT MONLEVADE (BRAZIL). Oct 62.
Order from BISI £1 15s BISI-2975

Abridged trans. of Stahl und Eisen (West Germany) 1960, v. 80 [no. 1] p. 47-49.

DESCRIPTORS: *Steel industry, Industrial production, Brazil.

Rotter, R. and Klapuch, M.
RESULTS OF INVESTIGATIONS ON THE POSSIBILITIES OF AUTOMATION OF X-RAY SPECTROGRAPHIC ANALYSIS. I. DESCRIPTION OF APPARATUS. II. PRINCIPLES OF AUTOMATING QUANTITATIVE ANALYSIS. Aug 62.
Order from BISI £2 15s BISI-2709

Trans. of Neue Hütte (East Germany) 1961, v. 6 [no. 9] p. 588-591.

DESCRIPTORS: *Ores, *X-ray spectroscopy, Automation, Industrial equipment, *Quantitative analysis.

Scalise, Mario.
SPECTROGRAPHIC DETERMINATION OF THE CONTENTS OF NICKEL AND COBALT IN "BRIGHT NICKEL-PLATING" BATHS. [1962] 19p.
Order from K-H $23.75 K-H 3388

Trans. of la Metallurgia Italiana, 1953 [v. 45] no. 5, p. 170-174.

DESCRIPTORS: *Nickel plating, *Cobalt, Determination, Spectrographic analysis, Electroplating solutions.

Schenck, H. and others.
EFFECT OF GROUP II ALLOYING ELEMENTS. Pt. 1 of On the Activity of Carbon in Liquid Iron Alloys. Aug 62, 3500 words.
Order from HB $9.80 HB-5637

Trans. of Archiv [für das] Eisenhüttenwesen (West Germany) 1962, v. 33, no. 4, p. 223-226.

DESCRIPTORS: Iron industry, *Iron alloys, Carbon, Boron, Nitrogen, Oxygen, Fluidized solids.

Schmidt, F.
CONTINUOUS CASTING OF SMALL SECTIONS. Oct 62
Order from BISI £5 10s BISI-2923

Trans. of Berg- und Hüttenmännische Monatshefte (Austria) 1962, v. 107 [no. 4] p. 173-182.

DESCRIPTORS: Liquid metals, *Casting.

Sergeev, G.
ELECTROSLAG REMELTING. 12 Oct 62 [8]p.
JPRS: 15668.
Order from OTS or SLA $1.10 62-33434

Trans. of Ekonomicheskaya Gazeta (USSR) 1962 [no. 33(54)] p. 12.

DESCRIPTORS: *Electric furnaces, *Slags, Melting, Metals, Purification, Economics.

The experience with the industrial production of the metal by the electroslag remelting process has proved that, with respect to its technical and economical importance and the simplicity of equipment, this method may play a comparable role in the metallurgy of high-quality steels, as the introduction of oxygen converters has played in large-scale metallurgy. The method of electroslag remelting is suitable for making steels and alloys of desired chemical composition. It is also possible to obtain by this method very homogeneous ingots of nonferrous metals and alloys.

Shilova, E. I.
CHANGE IN THE MECHANICAL PROPERTIES OF ALUMINIUM-COPPER-MAGNESIUM ALLOYS UNDER THE INFLUENCE OF DEFORMATION IN THE FRESHLY-HARDENED STATE AND OF HEATING FOR SHORT PERIODS AT 200°C. [1962].
Order from FRI FRI Trans-176

Trans. of mono. Legkie Splavy, Moscow [1958] p. 123-132.
Another trans. is available from LC or SLA mi$9.60, ph$33.30 in 59-19774, F-TS-9542, pt. 1 [1959] [233]p.

DESCRIPTORS: *Magnesium alloys, *Copper alloys, *Aluminum alloys, Mechanical properties, *Deformation, Hardening, Heating, Temperature, *Alloys

Smirnova, A. M. and Kudryavtsev, N. T.
INVESTIGATION OF THE INFLUENCE OF ULTRASONICS ON CHROME PLATING. [1962] 13p. 11 refs.
Order from OTS or SLA $1.60 62-14791

Trans. of #Zhurnal Prikladnoi Khimii (USSR) [1960] v. 33, no. 11, p. 2521-[2526].

DESCRIPTORS: *Chromium plating, Electrodeposition, *Ultrasonics, Cathodes (Electrolytic cell), Electric potential, Polarization.

Use of ultrasonics in chrome deposition process has no effect in electrolytic product yield, quality of product or cathodic polarization potentials. Cathodic polarization in the low current density range, before deposition of chromium, at the cathode is sharply lowered when ultrasonics are used, but is practically unchanged at higher current densities. Initial deposition of chromium in ultrasonic field is associated with higher current density. (Author)

Smolenskaya, G. N. and others.
ELECTROPLATING OF TITANIUM. Sep 62.
Order from HB $3.25 HB-5519

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 11, p. 42-44.

DESCRIPTORS: *Titanium, *Electroplating, Nickel plating, Copper plating, Zinc plating, Chromium plating, Rhodium, Silver plating, Gold plating.

Solodovnik, S. F.
SURFACE HARDENING OF ANNULAR GROOVES. Sep 62.
Order from HB $2.00 HB-5522

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 11, p. 5 and 48.

DESCRIPTORS: *Induction systems, *Coils, Surfaces, Metals, Hardening.

Stadelmaier, H. H. and Fraker, A. C.
NITROGEN-CONTAINING ALLOYS OF THE TRANSITION METALS MANGANESE, IRON, COBALT AND NICKEL WITH GALLIUM, GERMANIUM, INDIUM AND TIN. Sep 62.
Order from BISI £2 10s BISI-2905

Trans. of Zeitschrift für Metallkunde (West Germany) 1962, v. 53, no. 1, p. 48-51.

DESCRIPTORS: *Nitrogen, Transition elements, *Manganese alloys, *Iron alloys, *Cobalt alloys, *Nickel alloys, *Gallium, *Germanium, *Indium, *Tin.

Sveshnikov, D. A.
HEAT TREATMENT OF MAGNESIUM CAST-IRON CRANKSHAFTS. Sep 62.
Order from HB $4.50 HB-5516

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 11, p. 28-30 and p. 35-37.

DESCRIPTORS: *Crankshafts, *Magnesium, *Cast iron, Heat treatment.

Thomas H. and Wilke-Dorfurt, U.
THE INFLUENCE OF ADDITIONS ON THE AGE-HARDENING OF COPPER-BERYLLIUM ALLOYS. [1962].
Order from FRI FRI Trans-171

Trans. of Zeit[schrift] für Metallkunde (West Germany) 1959, v. 50, no. 8, p. 466-472.
Another trans. is available from SLA $1.60 as 62-16306 [1962] [20]p.

DESCRIPTORS: Aging, Hardening, *Copper alloys, *Beryllium alloys, Cobalt, Nickel, Iron, Metallurgy, Temperature, Atomic radii, Solubility, Precipitation, *Alloys

For abstract see Technical Translations 8:704, 1962.

Tumanov, V. I., Funke, V. F., and Belen'kaya, L. I.
WETTABILITY OF ALUMINUM OXIDE AND CARBIDES BY METALS OF THE IRON GROUP. 6 Nov 62 [10]p. 9 refs. JPRS: 16037.
Order from OTS or SLA $1.10 62-33712

Trans. of #Zhurnal Fizicheskoi Khimii (USSR) 1962, v. 36, no. 7, p. 1574-1577.

DESCRIPTORS: *Aluminum compounds, Oxides, *Carbides, *Wetting agents, Surface tension, Adhesion, Metals, Nickel, Molybdenum, Cobalt, Tungsten, Titanium.

There was obtained the dependency of surface tension, the contact angle of wetting, the work of adhesion, and the interphase tensions of the alloys Ni--Mo and Co--W on the hard surface Al_2O_3. Addition of tungsten and molybdenum up to 10 atom percent improved wettability of aluminum oxide by nickel and cobalt. Titanium carbide is not completely wetted by nickel. The dependency of the contact angle of wetting by nickel of carbides of the system TiC--WC that was obtained showed that solid solution WC--TiC twophase compositions, having structurally free tungsten carbide, are wetted better. (Author)

Vinogradov, G. A. and Fedorchenko, I. M.
EFFECT OF GASEOUS PHASE UPON THE ROLLING OF METAL POWDERS. July 62, 2000 words.
Order from HB $5.40 HB-5580

Trans. of Poroshkovaya Metallurgiya (USSR) 1961, v. 1, no. 1, p. 61-67.

DESCRIPTORS: *Gases, *Powder metals, *Rolling mills, Powder metallurgy, Particles, Viscosity, Vacuum systems.

Volkhausen, Clemens.
COLD ROLLING MILLS FOR NARROW- AND MEDIUM-STRIP. [1959] [12]p.
Order from SLA $1.60 61-18402

Trans. of Blech (West Germany) 1957, v. 4, no. 11, p. 88-92.

DESCRIPTORS: *Rolling mills, Costs, *Steel, Alloys, Hardness, Metal plates.

White, F. E. and Rossard, C.
INFLUENCE OF COPPER AND TIN ON THE INTRINSIC FORGEABILITY OF MILD STEELS. June 62, 6p. (figs. omitted) 7 refs.
Order from SLA $1.10 62-16838

Trans. of Revue de Métallurgie (France) 1962, v. 59, no. 3, p. 236-241.

DESCRIPTORS: *Steel, *Forging, *Tin, *Copper, Test methods, Deformation, Production.

Zakharova, G. V., Popov, I. A. and others.
NIOBIUM AND ITS ALLOYS: USE OF POWDER METALLURGY IN THE USSR. 31 Oct 62 [49]p. 11 refs. JPRS: 15978.
Order from OTS or SLA $4.60 62-33724

Trans. of mono. Niobii i Ego Splavy, Moscow, 1961, p. 19-21, 23-26, 174-175, 177-178, 206-208, 262-264, 283-286, 292-294, 296-299, 316-318.

DESCRIPTORS: *Niobium, *Niobium alloys, Production, *Powder metallurgy, Metallurgy, Powder metals, Metals, Sintering, Beryllium, Boron, Silicon, Chromium, Vanadium, Tungsten, Carbon, Molybdenum, Titanium.

Ferrous Metals

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO 72. 13 Sep 62 [29]p. JPRS: 15259.
Order from OTS or SLA $2.60 62-33037

Trans. of Referativnyi [Sbornik]. Ekonomika Promyshlennosti (USSR) 1962, no. 6, items 6 G 71-72; and from Kazakhstanskaya Pravda (USSR) 1962, 7 July, p. 3; Pravda Ukrainy (USSR) 1962, 24 May, p. 1; Pravda, Leningrad (USSR) 1962, 15 June, p. 4; and Stroitel'naya Gazeta (USSR) 1962, 6 July, p. 3.

DESCRIPTORS: *Industrial production, *Metallurgy, *Iron, *Ores, Railroads, *Railroad tracks, *Rolling mills, Machines, *Mining engineering, *Smelting, Costs, Labor.

Contents:
The iron ore reserves of Kazakhstan, by M. Mil'gram
Longer rails for higher railroad speeds, by V. Leporskii
Efficient new procedures of rolling mill, by I. Kirpichnikova
Inefficient use of machinery and equipment in Rudnyi and Tselinnyi Krai, by A. Gladtsen
Problems in the establishment of a new metallurgical base, by M. D. Darishev (abstract) (original article pub. in Akademiya Nauk Kazakhskoi SSR, Alma Ata. Vestnik, 1961 [v. 17] no. 9[198] p. 15-22)
Improved use of basic funds; an important means of increasing labor productivity in open-hearth operations, by V. P. Evstigneev (abstract) (original article pub. in mono. Proizvoditel'nost' Truda i Sebestoimost' Produktsii v Promyshlennosti, Moscow, 1961, p. 42-73).

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 79. 30 Oct 62 [14]p. JPRS: 15950.
Order from OTS or SLA $1.60 62-33658

Trans. of Sotsialisticheskii Trud (USSR) 1962 [v. 7] no. 8, p. 123-126; and from Ekonomicheskaya Gazeta (USSR) 1962, no. 36[57] p. 24.

DESCRIPTORS: *Industrial production, *Metallurgy, *Steel, *Smelting, Gas burners, Liquid metals, *Molding, *Labor, Industrial plants.

Contents:
Make way for progressive steel smelting techniques, by Yu. Molchanov and others
Produce improved equipment for continuous steel teeming, by V. Ustyuzhanin and others
The public bureau for the organization of labor at the Novosibirsk metallurgical plant, by I. Genken.

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 80. 30 Oct 62 [12]p. JPRS: 15949.
Order from OTS or SLA $1.60 62-33655

Trans. from Pravda, Moscow (USSR) 1962, 21 Aug, p. 2 and 24 Aug, p. 4.

DESCRIPTORS: *Industrial production, *Metallurgy, *Steel, Purification, Vacuum apparatus, Manufacturing methods, Industrial plants.

Contents:
Vacuum treatment of steel and shortage of necessary equipment, by S. Vekshinskii and A. Samarin
Inadequate attention given to oxygen-blown converter steel production at plant imeni Petrovskii, by G. Davydenko.

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 81. 31 Oct 62 [17]p. JPRS: 15971.
Order from OTS or SLA $1.60 62-33652

Trans. from Komsomol'skaya Pravda (USSR) 1962, 1 Sep, p. 2; Kazakhstanskaya Pravda (USSR) 1962, 27 May, p. 2; Ekonomicheskaya Gazeta (USSR) 1962, no. 36[57] p. 34-35.

DESCRIPTORS: *Industrial production, *Metallurgy, *Industrial plants, Construction, *Molding materials, Sand, *Steel, *Foundries, Control systems.

Contents:
Delays in the construction of the Orsk-Khalilovka metallurgical combine, by E. Zaslavskii
Construction delays at the Karaganda metallurgical plant, by M. Samarin
Problems in the production of molding sands, by A. Mart'yanov
Introduce the converter production of steel widely, by S. Mylko and N. Konashko
Reliable automatic controls needed for foundry operations, by N. Dubinin and E. Chernin.

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 82. 31 Oct 62 [13]p. JPRS: 15972.
Order from OTS or SLA $1.60 62-33654

Trans. from Ekonomicheskaya Gazeta (USSR) 1962, no. 33[54] p. 32; Pravda, Moscow (USSR) 1962, 27 Aug, p. 1; 2 Sep, p. 2.

DESCRIPTORS: *Industrial production, *Metallurgy, *Refractory materials, Industrial plants, *Steel, Manufacturing methods, Construction.

Contents:
Refractory scrap: a valuable raw material, by V. Nikulin
Shortcomings in the field of ferrous metallurgy and inefficiency of leading combines
Oxygen-blown converter steel recommended for construction projects, by A. Fomenko.

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 83. 31 Oct 62 [23]p. JPRS: 15973.
Order from OTS or SLA $2.60 62-33659

Trans. of #Metallurg (USSR) 1962 [v. 7] no. 8, p. 19-23, 29-30; and from Referativnyi Sbornik. Ekonomika Promyshlennosti (USSR) 1962, no. 8.

DESCRIPTORS: *Industrial production, *Metallurgy, *Rolling mills, Economics, *Pipes, Industrial equipment.

Contents:
Production and use of economical hot-rolled sections, by B. G. Fastovskii and A. N. Funde
More tubes for the national economy
Prospects of development of the ferrous metallurgy of the Ukrainian SSR (review of article by I. Bornatskii and N. Tereshchenko in Ekonomika Sovetskoi Ukrainy (USSR) 1962, no. 1, p. 25-32).

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 85. 8 Nov 62 [20]p. JPRS: 16096.
Order from OTS or SLA $1.60 62-33691

Trans. of #Metallurg (USSR) 1962 [v. 7] no. 9, p. 1-2; and from Sroitel'naya Gazeta (USSR) 1962, 12 Sep, p. 3; Ekonomicheskaya Gazeta (USSR) 1962, no. 38(59).

DESCRIPTORS: *Industrial production, Metallurgy, *Economics, *Industrial plants, Iron

Contents:
Growth of ferrous metallurgy in the Soviet Union, by S. M. Filippov
The Donetskii economic region lags behind the plan, by V. Pankratov
Unsatisfactory work at Chelyabinsk plant, by G. Menchinov

Apaev, B. A.
CERTAIN PHYSICAL PROPERTIES OF HIGH TEMPERATURE FERRIC CARBIDE χFe_xC, FORMING DURING ANNEALING AND PLASTIC DEFORMATION. 12 July 62 [18]p. 7 refs. FTD-TT-62-621; AD-283 880.
Order from OTS or SLA $1.60 62-32977

Unedited rough draft trans. of #Fizika Metallov i Metallovedenie (USSR) 1961, v. 12, no. 3, p. 409-416.

DESCRIPTORS: *Iron compounds, *Carbides, *Steel, Annealing, Plastic flow, Deformation, Physical properties, Chemical properties, Density, Electron diffraction analysis.

Calculated were chemical composition, density, magnetization of X carbide, forming during the annealing and plastic deformation. The calculation data lead to a conclusion, that in both these instances the carbide phase of iron with Curie point of 265°, has one and the same composition, identical density and magnetization; identical appears also the diffraction chart during the taking of electronograms (electron diffraction pictures) of carbide residues, formed from annealed and deformed species. (Author)

Baranov, O. O. and Pritomanova, M. I.
CHANGES IN VOLUME AND STRUCTURE OF STEEL DURING REPEATED GRAPHITIZATION ANNEALS. Aug 62, 1400 words.
Order from HB $4.60 HB-4335

Trans. of Akademiya Nauk URSR [Kiev]. Dopovidi, 1961, no. 4, p. 490-494.

DESCRIPTORS: Iron industry, *Annealing, *Steel, Molecular structure, *Graphite.

Boichenko, M. C.
CONTINUOUS CASTING OF STEEL, tr. by L. Herdan and R. Sewell. 1961, 230p.
Order from Butterworth Inc., 7235 Wisconsin Ave., Washington, 14, D. C. $9.50

Trans. of mono. [Nepreryvnaya Razlivka Stali, Moscow, 1957].

DESCRIPTORS: *Steel castings, Alloys, Microstructure.

Boichenko, M. S., Itskovich, G. M. and others.
A NEW STAGE IN THE DEVELOPMENT OF CONTINUOUS CASTING (WITH DISCUSSION). Oct 62.
Order from BISI £5 10s BISI-2921

Trans. of Berg- und Hüttenmännische Monatshefte (Austria) 1962, v. 107 [no. 4] p. 118-127.

DESCRIPTORS: *Steel, Liquid metals, *Casting, Dies, *Steel castings.

Borovszky, A.
PROCESSING OF RED MUD IN THE "DUNAI VASMU" (DANUBE IRON WORKS). Feb 62.
Order from BISI -2 10s BISI-2568

Trans. of Koh[aszati] Lapok (Hungary) 1961 [v. 16] Jan, p. 10-13.

DESCRIPTORS: Processing, *Blast furnaces, Sintering, Slags, Aluminum compounds, Oxides, Calcium compounds, Metallurgy.

Buhler, H.
CONTRIBUTION TO THE PROBLEM OF MEASUREMENT OF SURFACE ROUGHNESS. [1962] 4p. (figs. refs. tables omitted).
Order from SLA $1.10 62-16792

Trans. of Draht (West Germany) 1956, v. 7, no. 3, p. 85-87

DESCRIPTORS: *Steel, *Surfaces, Measurement, Quality control, *Steel wire.

The device operates on an electronic basis. For the purpose of measuring, a stylus is guided by hand over the surface to be investigated and in so doing is supported by a steel pin with a ball point. A second pin has a fine sapphire point. The small radius of sphericity of the sapphire point explores all uneven spots and slides down to the deepest "valleys"; the point, however, is not so delicately ground that it would break in manipulation or scratch the surface to be tested. It is necessary, however, that the contact pressure of the stylus does not exceed 10 g. The sapphire pin is connected to a piezoelectric crystal system which produces an electric voltage during the exploration process. This voltage is amplified, rectified and fed to an electric indicator the scale of which shows the measuring values of roughness. (Author)

Eckhard, S., Graue, G., and Marotz, R.
EXPERIENCES WITH VACUUM SPECTROMETERS IN THE STEELWORKS LABORATORY. I. USE OF A PRISM SPECTROMETER IN THE DETERMINATION OF CARBON, PHOSPHORUS AND SULPHUR IN NON-ALLOY STEELS. II. THE BEHAVIOUR OF VARIOUS STEELS UNDER A DAMPED CONDENSER DISCHARGE IN A GRATING SPECTROMETER. Oct 62.
Order from BISI -6 BISI-2935

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1962, v. 33, no. 3, p. 145-156.

DESCRIPTORS: *Steel, *Spectrographic analysis, Vacuum apparatus, *Carbon, Phosphorus, *Sulfur, *Copper, Determination, Silver electrodes, Electric discharges, Argon.

Efimov, V. A.
THERMOPHYSICAL PROCESSES DURING TEEMING. Oct 62.
Order from BISI -6 BISI-2735

Trans. of Voprosy Proizvodstva Stali (USSR) 1960, v. 7, p. 117-134.

DESCRIPTORS: Turbulent flow, *Steel, *Liquid metals, *Steel castings, Surfaces, Quality control, Molding, Temperature.

Folke, G. and Nygren, E.
DECOMPOSITION OF MARTENSITE IN IRON-CARBON ALLOYS. [1962] 11p. (figs. tables Eng. refs. omitted) 4 refs.
Order from SLA $1.60 62-16986

Trans. of Jernkontoret [Stockholm]. Annaler (Sweden) 1955, v. 139, no. 4, p. 250-264.

DESCRIPTORS: *Carbon alloys, *Iron alloys, *Martensite, Decomposition, X-ray diffraction analysis, *Steel.

Heinrich, F. J.
ON THE HOT TREATMENT OF SULPHURIC ACID SPENT PICKLE LIQUORS. July 62.
Order from BISI £2 10s BISI-2701

Trans. of Beiztechnik (West Germany) 1955, Mar, p. 36-39.

DESCRIPTORS: *Pickling compounds, Recovery, *Sulfuric acid, *Iron compounds, Oxides, Sulfates, Nitric acid.

Höffken, E. and Kootz, T.
NITROGEN CONTENT OF OPEN-HEARTH STEEL IN THE FURNACE, DURING POURING, AND IN THE FINISHED PRODUCT. Aug 62, 6500 words.
Order from HB $15.80 HB-5597

Trans. of Stahl und Eisen (West Germany) 1962, v. 82, no. 5, p. 253-260.

DESCRIPTORS: *Nitrogen, Open hearth furnaces, Steel, *Steel castings.

Horn, E.
METALLOGRAPHIC EXAMINATION OF RUPTURE-TEST SPECIMENS OF HEAT-RESISTING STEELS FOR CRACKS. Sep 62, 1300 words.
Order from HB $3.90 HB-5591

Trans. of DEW Technische Berichte [sic] 1961, v. 1, no. 1, p. 17-19.
Another trans. is available from BISI £2 5s as BISI-2178, July 61.

DESCRIPTORS: *Steel, *Metallurgical analysis, Fracture (Mechanics), Creep.

Housz, A. H.
ON THE LOCATION OF MODERN IRON WORKS ON THE COAST. [1962] [10]p.
Order from SLA $1.10 62-16895

Trans. of Stahl und Eisen (West Germany) 1960, v. 80, no. 5, p. 272-276.
Another trans. is available from BISI £2 15s as BISI-1784 [1960].

DESCRIPTORS: *Iron industry, Economics, *Industrial plants, *Steel, Transportation, Ores, Commerce, Mines, Shipping.

Discussions are presented on (1) the influence of freight charges for raw materials on the cost price of steel and the significance of transport cost for delivery of rolled steel to the user; (2) location with regard to transport cost; (3) suitability of coast for purchase of foreign ores and for disposal of finished product overseas; (4) past and present erection of works at the coast, particularly the iron works at Ijmuiden; (5) developments in the purchase of foreign ores; increase in ore demand, partnership in opening foreign ore mines, increased transport distances and use of ships with ever-increasing capacity; and (6) influence of land, of energy and water supply, of water and air purification as well as the possible application of by-products on the choice of site.

Koch, W. and Lüdering, K.
DETERMINATION OF CURRENT DENSITY-POTENTIAL CURVES IN CONJUNCTION WITH ELECTROLYTIC ISOLATION USING AN ELECTRONIC POTENTIOSTAT. Aug 62.
Order from BISI £5 BISI-2840

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1957, v. 28 [no. 4] p. 201-205.

DESCRIPTORS: Electrolytes, Citrates, Electric currents, Electric potential, Density, *Iron, Sulfuric acid, *Steel, Chromium alloys.

Kohn, A.
THE HETEROGENEITY OF KILLED STEEL INGOTS. Sep 61.
Order from BISI £15 BISI-1436

Trans. of Coulée de l'Acier, 1958 (Cahiers du Cessid) (1) pt. 3, 1-52 [sic].

DESCRIPTORS: *Steel castings, Castings.

Kuroedov, V. A.
NON-OXIDISING HEATING OF STEEL IN OPEN-FLAME FURNACES. [1960] [14]p. 2 refs.
Order from OTS or SLA $1.60 62-14546

Trans. of Kuznechno-Shtampovochnoe Proizvodstvo (USSR) 1959, v. 1, no. 1, p. 25-31.
Another trans. is available from BISI £6 10s as BISI-1541 [1960].

DESCRIPTORS: *Steel, Heat treatment, Costs, Scale, Reduction, Quality control, Dies, Forging, Electric furnaces, Waste gases.

Levin, E. E. and Masaleva, E. N.
A HEAT-RESISTANT CAST CHROMIUM STEEL AS A MATERIAL FOR COMPONENTS OF POWER INSTALLATIONS OPERATING AT TEMPERATURES UP TO 600°C. Oct 62.
Order from BISI £4 BISI-3002

Trans. of Energomashinostroenie (USSR) 1962, v. 8 [no. 5] p. 24-27.

DESCRIPTORS: *Heat resistant alloys, *Chromium alloys, *Steel castings, Heat treatment, Physical properties, *Power plants.

Litvakovskaya, Yu. L. and Bardachev, Yu. P.
CAUSES OF SATURATION OF METAL-MOLD SURFACES WITH SULFUR. Aug 62, 1100 words.
Order from HB $2.90 HB-5680

Trans. of Liteinoe Proizvodstvo (USSR) 1959, no. 3, p. 29-30.

DESCRIPTORS: *Cast iron, Dies, Surface properties, *Sulfur.

Mitrofanov, A. A. and others.
UTILIZATION OF CONVERTER STEEL IN THE AUTO INDUSTRY. Sep 62.
Order from HB $2.00 HB-5520

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 11, p. 46.

DESCRIPTORS: *Automotive industry, *Vehicle wheels, *Steel.

Modin, S.
THE ISOTHERMAL TRANSFORMATION OF AUSTENITE IN CARBON STEELS CONTAINING 0.50% C AND 0.18% C. Oct 62.
Order from BISI £1 10s BISI-2951

Trans. of Jernkontoret [Stockholm]. Annaler (Sweden) 1958, v. 142, no. 4, p. 209-211.

DESCRIPTORS: *Steel, Carbon, *Austenite, Transformations.

Naumann, F. K.
THE EMBRITTLEMENT OF THE EDGES OF SHEARED HEAVY PLATES MADE FROM BASIC CONVERTER AND OPEN-HEARTH STEELS. I. WORKSHOP TESTS. Oct 62.
Order from BISI £4 15s BISI-2855

Trans. of Stahl und Eisen (West Germany) 1961, v. 81 [no. 21] p. 1404-1409.

DESCRIPTORS: *Metal plates, *Steel, *Hydrogen embrittlement, Fracture (Mechanics).

Nikolaev, N. A.
INVESTIGATION OF THE QUALITY OF CONTINUOUSLY CAST STEEL INGOT. Paper from All-Union Conference on the Continuous Casting of Steel (no. 1) 17-19 Oct 55. [1960] [17]p.
Order from OTS or SLA $1.60 62-14671

Trans. of mono. [Nepreryvnaya Razlivka Stali] (The Continuous Casting of Steel) Moscow, 1956, p. 49-61.

DESCRIPTORS: *Steel, *Casting, Steel castings, Quality control, Production.

The continuous casting process entails the continuous pouring of liquid metal from a furnace or ladle directly, or through an intermediate pouring device or tundish, into the top of a water-cooled mold, the partly or completely solidified billet being continuously withdrawn by one method or another from the bottom of the mold. In the continuous casting process, the length of the cast product may many times exceed the length of the mold. The gradual and continuous growth of a long billet ensures concentration of the pipe at the top end of the cast billet and consequently less discard is required and yield is increased. Another important advantage of continuous casting, especially the continuous casting of steel, is the possibility of casting billets of relatively small section, i.e. of obtaining a semi-product directly from liquid metal ready for forging, rolling or stamping. (Author)

Nohl, H., Lux, B., and Siegfried, W.
RESEARCH INTO THE INFLUENCE OF ADDITION ELEMENTS IN AUSTENITIC STEELS ON THE LIMIT OF ELASTICITY AT ROOM TEMPERATURE. [1960] [17]p. 11 refs.
Order from SLA $1.60 62-16848

Trans. of Revue de Métallurgie. Mémoires Scientifiques (France) 1959, v. 56, no. 1, p. 22-29. Another trans. is available from BISI £4 as BISI-1783 [1960].

DESCRIPTORS: *Austenite, Mechanical properties, *Chemical elements, Metallurgy.

Odone, G. and Filippini, A.
SKIN THICKNESS AND SULFUR DISTRIBUTION IN RIMMED STEEL INGOTS. Aug 62, 5400 words.
Order from HB $13.50 HB-5457

Trans. of la Metallurgia Italiana, 1960, v. 52, no. 12, p. 786-794.

DESCRIPTORS: *Steel castings, Physical properties, *Sulfur, Distribution.

Peter, W. and Wiesenecker, I.
EFFECT OF ALUMINIUM AND NITROGEN ON THE CHARACTERISTIC GRAIN SIZE OF CHROME-MANGANESE CASE-HARDENING STEEL. Oct 62.
Order from BISI £4 5s BISI-2895

Trans. of Stahl und Eisen (West Germany) 1962, v. 82 [no. 1] p. 23-30.

DESCRIPTORS: *Steel, *Chromium alloys, *Manganese, *Aluminum, *Nitrogen, Austenite, Grains (Metallurgy).

Peters, R. and others.
USE OF GAS-EVOLVING SALTS AND THEIR EFFECT ON THE DISTRIBUTION OF NONMETALLIC INCLUSIONS. Aug 62, 1200 words.
Order from HB $3.60 HB-5667

Trans. of Neue Hütte (East Germany) 1962, v. 7, no. 5, p. 283-285.

DESCRIPTORS: *Steel castings, Salts, Gases, Impurities, Distribution.

Pobedin, I. S. and Prikhot'ko, I. F.
MECCANISMI PER LA PUNZONATURA DEI BLUMI DI SEZIONE QUADRA E RETTANGOLARE (Mechanism for the Punching of the Bloom with Square and Rectangular Section). 22p. CNP-27. (text in Italian).
Order from OTS or ETC $1.89 62-26099

Trans. of Stal' (USSR) 1957 [v. 17] no. 4, p. 333-340. Another trans. is available in English from OTS or SLA $1.60 as 62-13188, BISI-717, Oct 57 [11]p.

DESCRIPTORS: *Cutting tools, Metal plates, Ship plates.

Postnov, L. M. and Gulyaev, B. B.
AN INVESTIGATION OF THE MECHANICAL PROPERTIES OF STEEL DURING SOLIDIFICATION AND AN ANALYSIS OF THE PROCESS OF THE FORMATION OF HOT CRACKS DURING CONTINUOUS CASTING. Paper from All-Union Conference on the Continuous Casting of Steel (no. 1) 17-19 Oct 55. [1960] [12]p. 7 refs.
Order from OTS or SLA $1.60 62-14670

Trans. of mono. [Nepreryvnaya Razlivka Stali] (The Continuous Casting of Steel) Moscow, 1956, p. 212-222. Another trans. is available from BISI [illegible]6 as BISI-1616 [1960].

DESCRIPTORS: *Steel, Mechanical properties, Steel castings, Production, Fracture (Mechanics)

Raseev, D.
KINETICS OF SILICON SURFACE-IMPREGNATION OF PLAIN CARBON STEEL. Aug 62, 3100 words.
Order from HB $9.30 HB-5428

Trans. of [Academia Republicii Populare Romine. Centrul de Cercetari Metalurgice]. Studii si Cercetarii de Metalurgie (Rumania) 1961, v. 6, no. 2, p. 161-169.

DESCRIPTORS: *Silicon coatings, Carbon compounds, *Steel, Porosity.

Schenck, H. and others.
PREVENTION OF CAKING OF FLUIDIZED BEDS IN THE REDUCTION OF IRON ORES. Sep 62, 4200 words.
Order from HB $9.80 HB-5636

Trans. of Archiv [für das] Eisenhüttenwesen (West Germany) 1962, v. 33 [no. 4] p. 211-216.

DESCRIPTORS: *Iron, *Ores, Reduction, *Fluidized solids, Sintering, Nitrogen, Carbon compounds, Monoxides, Hydrogen.

Schmidt, Gottfried.
CONSIDERATIONS OF ECONOMY IN THE CHOICE OF THE CHARGE IN OPEN HEARTH STEEL PROCESS. [1960] [14]p.
Order from SLA $1.60 62-16863

Trans. of Stahl und Eisen (West Germany) 1960, v. 80 [no. 5] p. 282-285 ([Verein Deutscher Eisenhüttenleute (West Germany). Berichte]-307).
Another trans. is available from BISI £2 15s as BISI-1742 [1960].

DESCRIPTORS: *Open hearth furnaces, Economics, *Iron, *Liquid metals, Production, *Steel, Processing.

Schmitt, W.
NEW PROCEDURE FOR HEATING O.H. FURNACES WITH COLD GAS AND FUEL OIL, PT. I. [1960] [13] p. 7 refs.
Order from SLA $1.60 62-16877

Partial trans. (p. 616-619) of Stahl u[nd] Eisen (West Germany) 1960, v. 80, no. 9, p. 616-621.
Another trans. is available from BISI £3 5s as BISI-1760 [1960].

DESCRIPTORS: *Open hearth furnaces, Fuel injection, Heating, Gases, Fuel oil, Flames, Melting, *Steel industry, *Steel, Slags.

Severdenko, V. P. and Malei, T. P.
PRESS FORMING OF PARTS FROM LIQUID STEEL. Aug 62, 1000 words.
Order from HB $2.80 HB-5665

Trans. of Akademiya Navuk BSSR [Minsk]. Doklady, 1961, v. 5, no. 6, p. 263-265.

DESCRIPTORS: *Metal-forming presses, *Pressure, *Liquid metals, *Steel.

Signora, M. and Cardano, R.
IMPROVEMENT IN PERFORMANCE OF THE TERNI (ITALY) CONTINUOUS CASTING PLANT. Sep 62, 3100 words.
Order from HB $8.80 HB-5643

Trans. of Berg- und Hüttenmännische Monatshefte (Austria) 1962, v. 107, no. 4, p. 152-157.

DESCRIPTORS: *Industrial production, Industrial plants, *Steel, *Casting.

Stetsenko, B. A.
INCREASING THE STRENGTH OF CYANIDED STEEL. Sep 62.
Order from HB $2.00 HB-5521

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 11, p. 46-47.

DESCRIPTORS: *Steel, *Cyanides, Tensile properties, Furnaces, Kerosene, Ammonia, Carbon, Nitrogen, Distribution.

Telfer, E., Norman, D., and Ott, G. E.
RECENT DEVELOPMENTS OF WEAR-RESISTANT CAST MATERIALS FOR HARD GRINDING PURPOSES, I-II. Oct 62.
Order from BISI £5 10s BISI-2964

Trans. of Giesserei (West Germany) 1959 [v. 46] 30 July, p. 441-447 and 13 Aug, p. 471-478.

DESCRIPTORS: *Cast steel, *Manganese alloys, *Molybdenum alloys, *Chromium alloys, *Nickel alloys, Grinders.

Terry, D.
NEW TESTING METHOD FOR PRECISION STEEL TUBES (ULTRASONIC AND EDDY CURRENT). Oct 62.
Order from BISI £3 BISI-2769

Trans. of Bänder, Bleche, Rohre (West Germany) 1961 [no. 10] p. 494-497.

DESCRIPTORS: *Steel tubing, *Non-destructive testing, *Ultrasonic radiation, Magnetic fields.

Toklachnik, S. V.
EFFECT OF REPEATED IMPACTS ON THE RESISTANCE OF STEEL TO SMALL PLASTIC DEFORMATION. 6 Aug 62 [13]p. 12 refs. FTD-TT-62-515; AD-284 104.
Order from OTS or SLA $1.60 62-33395

Unedited rough draft trans. of Izvestiya Vysshikh uchebnykh Zavadenii. Mashinostroenie (USSR) 1961, no. 4, p. 101-107.

DESCRIPTORS: *Steel, Plasticity, *Deformation, Impact shock, Shock resistance, Fatigue (Mechanics), Heat treatment, Stresses, Load distribution, Mechanical properties, Tensile properties.

Tyberg, Bertile.
PROBLEMS AND DEVELOPMENTS IN THE MALLEABLE IRON FIELD. [1962] 25p.
Order from K-H $31.25 K-H 3537

Trans. of Gjuteriet (Sweden) 1950, v. 40, p. 181-188.

DESCRIPTORS: *Iron industry, Iron, Manufacturing methods.

Ushijima, K.
ON POSITIVE MEASURES FOR PREVENTION OF DEFECTS IN CONTINUOUS-CAST BILLETS. Pt. 7 of Study of [the] Continuous Casting of Steel. Sep 62, 2000 words.
Order from HB $6.80 HB-5666

Trans. of Tetsu to Hagane (Japan) 1962, v. 48, no. 7, p. 845-849.

DESCRIPTORS: *Cast steel, Deformation, Heat transfer. Dies, Crystal structure, *Steel, *Casting.

Volkova, T. I. and Petropavlovskaya, Z. N.
PEARLITIC STEEL EP 44 (TsZh 10) RELAXATION-RESISTANCE AT 565-600°C. Oct 62.
Order from BISI £3 10s BISI-3005

Trans. of Energomashinostroenie (USSR) 1962 [v. 8] no. 1, p. 33-36.

DESCRIPTORS: *Pearlite, *Steel, Relaxation time, Resistance, *Turbines.

White, F. E. and Rossard, C.
THE INFLUENCE OF COPPER AND TIN ON THE INTRINSIC FORGEABILITY OF MILD STEELS. Oct 62.
Order from BISI £2 10s BISI-2928

Trans. of Revue de Métallurgie (France) 1962, v. 59 [no. 3] p. 237-241.
Another trans. is available from SLA $1.10 as 62-16838 June 62, 6p.

DESCRIPTORS: *Steel, *Forging, *Tin alloys, *Copper alloys, Deformation, Temperature, Rupture, Microanalysis, Microstructure.

Wolf, J.
THE DETERMINATION OF RATED CAPACITY AND PRODUCTION CONTROL IN THE GRINDING AND DESEAMING OF BILLETS ON THE BASIS OF STATISTICAL ANALYSIS OF PERFORMANCE. [1960] [11]p.
Order from SLA $1.60 62-16859

Trans. of Stahl und Eisen (West Germany) 1959, v. 79 [no. 15] p. 1075-1079 (Verein Deutscher Eisenhüttenleute (West Germany). [Berichte]-299).
Another trans. is available from BISI £3 as BISI-1548 [1960].

DESCRIPTORS: *Steel, Machining, Deseaming, Statistical analysis, Grinders, Production, Control, Surface area, Costs, Reduction.

Time studies carried out in the dressing department and statistical evaluation by means of punched cards of operational results obtained over a long period have made it possible to determine the variability of work load according to cross-section and surface quality for the all-round grinding and de-seaming of billets and blooms, and thereby to develop an accurate method of measuring production capacity. It was established that the work done per ton in all-round grinding is proportional to the area of the surface to be ground. Since the surface area per ton is, in its turn, dependent on the cross-section of the billet, this cross-section is a determining factor in the evaluation of capacity. In accordance with this variable work load per ton as determined by the cross-section, equalization factors for each cross-section were calculated; these enable the tons produced to be converted into equivalent reference tons, thus making possible a real determination of capacity. (Author)

Yagunova, V. A. and Popov, K. V.
THE HYDROGEN BRITTLENESS OF IRON-CHROMIUM ALLOYS AS A FUNCTION OF THE TEMPERATURE AND THE TESTING RATE. 8 May 62 [13]p. 20 refs. FTD-TT-62-444.
Order from OTS or SLA $1.60 62-25844

Unedited rough draft trans. of #Fizika Metallov i Metallovedenie (USSR) 1961, v. 12, no. 2, p. 176-182.

DESCRIPTORS: *Iron alloys, *Chromium alloys, *Hydrogen embrittlement, Temperature, *Plasticity, Deformation, Dislocations.

The plasticity of iron-chromium alloys containing hydrogen in solid solution has a minimum in the range of

temperatures from -60° to -100°, a minimum which shifts toward the lower boundary of this region, when the rate of deformation is decreased. The presence of a minimum may be attributed to the appearance of additional obstacles to the movement of the dislocations. These obstacles are stationary dislocations stopped by clouds of hydrogen atoms. The disappearance of the obstacles may be the result of the movement of previously stopped dislocations together with the hydrogen clouds surrounding them. (Author)

Zak, H. and Kulinski, Z.
VACUUM DECARBURIZATION AND NITRIDING OF FERRO-MANGANESE. Oct 62.
Order from BISI £7 5s BISI-2969

Trans. of Prace Instytutow Hutniczych (Poland) 1961, v. 13, no. 1, p. 27-36.

DESCRIPTORS: *Iron alloys, *Manganese alloys, Purification, Vacuum systems, Carbon, Nitration.

Light Metals

INVESTIGATION OF POWDER-METAL TITANIUM ALLOYS. 29 Oct 62 [17]p. 8 refs. JPRS: 15909.
Order from OTS or SLA $1.60 62-33609

Trans. of Titan i Ego Splavy (USSR) 1962, v. 7, p. 130-139.

DESCRIPTORS: *Powder metallurgy, *Titanium alloys, *Aluminum alloys, *Silicon alloys, Chromium alloys, Iron alloys, Boron alloys, Microstructure, Physical properties.

Contents:
Effect of aluminum on the structure and properties of a six-component powder metallurgy alloy of the Ti-Al-Cr-Fe-Si-B system, by I. I. Kornilov and others
Effect of silicon on the structure and properties of a six-component powder metallurgy alloy of the Ti-Al-Cr-Fe-Si-B system, by I. I. Kornilov and others.

Altenpohl, D.
LATTICE VACANCIES IN ALUMINIUM. [Presented at the International Light Metal Conference (no. 4) Leoben, 20 June 61]. [1962].
Order from FRI FRI Trans-172

Trans. of Aluminium (West Germany) 1961, v. 37, no. p. 401-411.
Another trans. is available from SLA $2.60 as 62-14836 [1962] 26p.

DESCRIPTORS: *Aluminum, Crystal structure, *Lattices.

Croutzeilles, M., Mirand, P., and Saulnier, A.
STUDY BY DIRECT ELECTRON MICROSCOPY AND ELECTRON DIFFRACTION OF THE ω PHASE IN TITANIUM ALLOYS. [1962].
Order from FRI FRI Trans-178

Trans. of [Academie des Sciences, Paris]. Comptes Rendus (France) 1961, v. 253, no. 23, p. 2685-2687 (pub. by Gauthier-Villars et Cie., Paris).

DESCRIPTORS: *Titanium alloys, *Electron microscopy, *Electron diffraction analysis, Phase studies.

Eversheim, P.
INVESTIGATIONS ON THE ELECTRICAL CONDUCTIVITY OF ALUMINUM. [1962] 5p. (figs. omitted) 4 refs.
Order from SLA $1.10 62-16994

Trans. of Aluminium (Germany) 1955 [v. 31, no. 7/8] p. 338-341.

DESCRIPTORS: *Aluminum, *Electrical conductance.

Kaizik, K.
WELDED-ON SILVER-CONTACTS FOR ALUMINUM CONDUCTORS. [1962] 3p. (table figs. refs. omitted).
Order from SLA $1.10 62-16955

Trans. of Aluminium (Germany) 1955, v. 31 [no. 7/8] p. 344-345.

DESCRIPTORS: *Conductors, *Aluminum, *Sliding contacts, Silver, Electric welding.

Kuperman, Ya. M.
ALUMINUM IN PIPELINE CONSTRUCTION. [1962] 8p.
Order from OTS or SLA $1.10 62-16288

Trans. of Stroitel'stvo Truboprovodov (USSR) 1959 [v. 4] no. 2, p. 6-9.

DESCRIPTORS: *Aluminum tubing, *Pipes, Construction, Production, Economics, *Aluminum alloys.

Morozov, E. I, and others.
ELECTROSLAG SMELTING OF TITANIUM INGOTS. 13 Nov 62 [15]p. 2 refs. JPRS: 16144.
Order from OTS or SLA $1.60 63-13085

Trans. of mono. Titan v Promyshlennosti (Titanium in Industry) Moscow, 1961, p. 314-326.

DESCRIPTORS: *Titanium, *Castings, *Smelting, Slags, *Electric furnaces, Electrodes, Crystallization.

Structural Metallurgy and Corrosion

Akimov, G. V.
THEORY OF POLYELECTRODE ELECTROCHEMICAL SYSTEMS AS APPLIED TO CORROSION PROBLEMS. [1962] 3p. 10 refs.
Order from OTS or SLA $1.10 62-16807

[Abstract] trans. of Uspekhi Khimii (USSR) 1943, v. 12, no. 5, p. 374-395.

DESCRIPTORS: *Corrosion, Electrochemistry, Electrodes, Polymers, Theory, Metals, Aluminum alloys, Stainless steel.

Altenpohl, D.
CORROSION PROTECTION OF ALUMINUM BY NATURAL OR REINFORCED OXIDE FILMS: RECENT INVESTIGATIONS [Korrosionsschutz des Aluminiums durch Natürliche oder Verstärkte Oxydschidhten: Neuere Untersuchungen]. [1962] 16p. (figs. refs. tables omitted).
Order from SLA $1.60 62-16912

Trans. of Metall (West Germany) 1955, v. 9 [no. 5/6] p. 164-171.
Another trans. is available from SLA as 57-02570, 35p.

DESCRIPTORS: *Aluminum, *Corrosion inhibition, *Oxidation inhibitors, Oxides, Films, Coatings, Water vapor, Anodes (Electrolytic cell), Reinforcing materials.

Arbuzov, M. P. and Gitgartz, M. I.
INVESTIGATING THE STATE OF A SOLID SOLUTION OF AN E1437A ALLOY DURING AGING. 16 May 62 [13]p. 6 refs. FTD-TT-62-509.
Order from OTS or SLA $1.60 62-25849

Unedited rough draft trans. of #Fizika Metallov i Metallovedenie (USSR) 1961, v. 11, no. 4, p. 568-574.

DESCRIPTORS: *Alloys, Aging, *Metallic crystals, Lattices, X-ray diffraction analysis, Decomposition, Reaction kinetics, Chromium alloys, Titanium alloys.

X-ray analysis was made of the decomposition kinetics of a solid solution of E1437A alloy by the change in lattice constant for various temperatures and time of exposure. (Author)

Bäumel, A. and Thomisch, W.
TESTING A HYDROCHLORIC ACID-GLYCOL ELECTROLYTE FOR RESIDUAL ISOLATION OF CHEMICALLY RESISTANT STEELS. Oct 62.
Order from BISI 2850

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1962, v. 33 [no. 2] p. 91-100.

DESCRIPTORS: *Steel, Corrosion research, *Electrolytes, *Hydrochloric acid, *Glycols, Methanols, Citrates, *Carbides.

Bohm, H.
INVESTIGATION OF PRECIPITATION AND AGEING IN AN A1-Ge ALLOY. [1962] [15]p. 6 refs.
Order from SLA $1.60 62-16599

Trans. of Z[eitschrift für] Metallk[un]de (West Germany) 1960, v. 51, no. 7, p. 409-413.

DESCRIPTORS: *Aluminum alloys, *Germanium alloys, Microanalysis, X-rays, Hardness, Conductivity, Measurement, Cooling, Temperature, Electrostatic precipitation, Aging.

The course of precipitation and ageing in an A1 alloy containing 5% Ge at ageing temperatures between 100 and 300°C, after quenching from the solid solution range has been traced by means of hardness and conductivity measurements, microscopic examination and X-ray analysis. No signs of cold ageing could be detected. The precipitation rate of the germanium from the A1-Ge solid is highly dependent on the homogenising temperature and the cooling rate after homogenisation. Moreover, the precipitation rate can be substantially modified by prior ageing at temperatures above and below the operative ageing temperature. The results are discussed and an attempt is made to interpret them. (Author)

Crussard, C.
ELECTRONIC MICROANALYZERS AND AUTORADIOGRAPHY AND THEIR USE FOR STUDYING SEGREGATIONS. Sep 62.
Order from BISI 2899

Trans. of Berg- und Hüttenmännische Monatshefte (Austria) 1962, v. 107 [no. 1] p. 1-12.

DESCRIPTORS: *Steel, *Microanalysis, Electronic equipment, *Autoradiography.

Gershovich, N. G. and Nekhendzi, Yu. A.
SOLIDIFICATION AND THE PHENOMENA ASSOCIATED THEREWITH AS A FUNCTION OF THE PHYSICO-CHEMICAL CONSTANTS OF ALLOYS (Zatverdevanie i Svyazannye s Nim Yavleniya kak Funkstii Fiziko-Khimicheskikh Konstant Splavov). [1962] [36]p. (foreign text included) 14 refs.
Order from OTS or SLA $3.60 62-10217

Trans. of Russian mono. High Temperature Methods, n. p., n. d., p. 351-366.

DESCRIPTORS: *Alloys, *Fluidized solids, *Castings, Quality control, Heat transfer, Thermodynamics, Phase studies, Crystallization, Flowmeters, Cast steel, *High temperature research.

An analysis shows that flowability is a function of solidification time and nature (type) of alloy. The relative

amount of solid phase (m) in these alloys may vary within the limits of 10 to 40%, other technological conditions being the same. Thus m, under specific technological conditions, may be considered in itself a kind of "constant" of an alloy which, together with others, more strictly purely physical constants (L and C_h) determine the flowability of an alloy.

Getsov, L. B. [Zhirnov, D. F.] and others.
EFFECT OF STRUCTURE ON THE HOT STRENGTH OF ALLOYS. Sep 62.
Order from HB $2.75 HB-5487

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 9, p. 12-16.
Another trans. is available from OTS or SLA $1.10 as 61-27628, DSIR LLU M. 3222 [1961] [9]p.

DESCRIPTORS: *Heat resistant alloys, *Steel, Crystal structure, *Grains (Metallurgy), Fracture (Mechanics), Rupture, Mechanical properties, Tensile properties, Thermal stresses.

For abstract see Technical Translations 7: 165, 1962.

Kishkin, S. T. and Polyak, E. V.
CREEP-RUPTURE KINETICS OF HEAT-RESISTANT ALLOYS. Sep 62.
Order from HB $3.50 HB-5485

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 9, p. 2-6.
Another trans. is available from OTS or SLA $1.10 as 61-27633, DSIR LLU M. 3217 [1961] [9]p.

DESCRIPTORS: *Heat resistant alloys, *Fracture (Mechanics), Reaction kinetics, Creep, Metals, Mechanical properties, Alloys.

For abstract see Technical Translations 6: 935, 1961.

Koval'chenko, M. S., Neshpor, V. S., and Samsonov G. V.
INVESTIGATION OF ZIRCONIUM BORIDE-MOLYBDENUM ALLOYS. 22 Mar 62 [6]p. 10 refs. F-TS-9801
Order from OTS or SLA $1.10 62-24357

Trans. of Akademiya Nauk URSR [Kiev]. Dopovidi, 1958 no. 7, p. 740-742.
Another trans. is available from LC or SLA mi$1.80, ph$1.80 as 60-23877, F-TS-9954a, Apr 60 [8]p.

DESCRIPTORS: *Molybdenum alloys, *Borides, Alloys, *Zirconium alloys, *Transition elements, *Zirconium compounds, Melting, High temperature research, Metallurgical analysis, X-rays, Calorimetry, Microstructure.

This report presents the results obtained during the study of the reaction of zirconium boride with molybdenum. The investigation was carried out with the aid of metallographic, roentgenographic (X-ray) and visual-thermal analyses. Alloys with a predominance of zirconium boride show the first signs of melting at temperatures ranging from 1900° -2000°. Alloys containing of from 10 to 60 at% of molybdenum do not show any sign of melting up to 2000°.

Martinod, H. and Calvet, J.
STRUCTURAL HARDENING AND REVERSION IN ALUMINIUM-NICKEL ALLOYS. [1962].
Order from FRI FRI Trans-179

Trans. of Rev[ue de] Métallurg[ie]. Mémoires Scientifiques (France) 1960, v. 57, no. 5, p. 325-337.

DESCRIPTORS: *Nickel alloys, *Aluminum alloys, Microstructure, Hardening, Phase transitions, Chemical reactions.

Pugina, L. I. and Romanov, V. V.
CORROSION OF IRON-BASE SINTERED MATERIALS IN .3% SODIUM CHLORIDE SOLUTION. Aug 62, 2600 words.
Order from HB $7.80 HB-5581

Trans. of Poroshkovaya Metallurgiya (USSR) 1961, v. 1, no. 1, p. 68-74.

DESCRIPTORS: *Sintered iron, Sodium compounds, Aluminum, Tin, *Corrosion, *Resistance, Chlorides.

Rossard, C. and Blain, P.
A TORSIONAL SIMULATION METHOD FOR DETERMINING THE INFLUENCE OF HOT ROLLING CONDITIONS ON THE STRUCTURE OF A STEEL. Oct 62.
Order from BISI £ 4 15s BISI-2940

Trans. of Revue de Metallurgie (France) 1962, v. 59 [no. 3] p. 223-236.

DESCRIPTORS: *Steel, Rolling mills, Torsion meters, Deformation, Simulation.

Sagel, K.
THE INFLUENCE OF DEFORMATION ON THE COLD ROLLING AND RECRYSTALLIZATION TEXTURES OF SILICON-IRON SHEETS. Oct 62.
Order from BISI £ 6 10s BISI-2197

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1961, v. 32 [no. 3] p. 153-164.

DESCRIPTORS: *Iron alloys, *Silicon alloys, Sheets, Crystallization, Deformation, Rolling mills, X-ray diffraction analysis, Torque.

Schmid, Heinz.
THE PROBLEM OF THE GRAINSIZE AND THE HARDENING OF GOLD-PLATINUM ALLOYS (Zur Frage der Korngrösse und Aushärtung von Gold-Platin-Legierungen) [1962] [32]p. (foreign text included) 15 refs.
Order from SLA $3.60 62-10942

Trans. of Metall (West Germany) 1958, v. 12, no. 7, p. 612-619.
Another trans. is available from ATS $13.70 as ATS-13L31G [1959] 15p.

DESCRIPTORS: *Platinum alloys, *Gold alloys, Hardening, Grains (Metallurgy), Microstructure, Alloys, Tensile properties, *Rhodium alloys.

Weisz, M.
CONTRIBUTION TO THE PHYSICAL INVESTIGATION OF FATIGUE DAMAGE. [1959] 37p. 22 refs.
Order from SLA $3.60 62-14059

Trans. of [Revue de Métallurgie (France) 1959, v. 56, no. 1, Jan, p. 83-103].
Another trans. is available from BISI £8 15s as BISI-1264 [1959].

DESCRIPTORS: *Fatigue (Mechanics), Failure (Mechanics), *Metals, Mechanical properties, Deformation, Stresses.

Zabik, Wladyslaw.
HYDROGEN CORROSION OF STEEL AND METHODS FOR ITS PREVENTION (HYDROGEN BRITTLENESS OF STEEL) (Korozja Wodorowa Stali i Sposoby Zapobiegania jej (Kruchosc Wodorowa Stali)). 1959 [19]p. 10 refs. NRL Trans. no. 763.
Order from OTS or SLA $1.60 60-21011

Trans. of Przeglad Mechaniczny (Poland) 1957, v. 16, no. 2, p. 58-64.

DESCRIPTORS: *Steel, *Hydrogen embrittlement, Hydrogen, Corrosion, *Corrosion inhibition, *Corrosive gases, Photoengraving, Sheets, Ammonia, Synthesis, Alloys, Additives.

The article discusses concepts related to chemical and electrochemical corrosion, the action of gases on metals, the course of the absorption and diffusion of gases, the passivation of a metal. The author then takes up the technical significance of this phenomenon, discussing gas corrosion under industrial conditions, i.e. the action of hydrogen on steel in the course of etching of steel sheets, the operating conditions of the installations for the synthesis of ammonia. Effects of the corrosive action of hydrogen are discussed, such as blisters, internal cracks in the material, the decline in mechanical and plastic properties. Finally, methods of preventing hydrogen corrosion are given. (Author)

Zotova, E. V.
A Cr-Ni-Mo-Cu STEEL RESISTANT TO CORROSION IN SULFURIC ACID PICKLING SOLUTIONS. Sep 62.
Order from HB $2.00 HB-5512

Trans. of #Metallov[edenie i] Term[icheskaya] Obrab-[otka] Met[allov] (USSR) 1960, no. 11, p. 12-15.

DESCRIPTORS: *Corrosion resistant alloys, *Chromium alloys, *Nickel alloys, *Molybdenum alloys, *Copper alloys, Sulfuric acid, Pickling.

NUCLEAR PHYSICS AND NUCLEAR CHEMISTRY

SOVIET THERMONUCLEAR FUSION RESEARCH: RECENT INFORMATION. 19 Sep 61 [3]p. AID Rept. 61-134; AD-265 372.
Order from OTS or SLA $1.10 61-28800

Review of Izvestiya (USSR) 1961, 8 Sep, p. 2; 13 Sep, p. 4; and Nauka i Zhizn' (USSR) 1961 [v. 28] no. 7, ##p. 22-26.
##A complete trans. is available from OTS or SLA $1.60 as UCRL Trans-742, Oct 61, 15p.

DESCRIPTORS: *Thermonuclear reactions, Plasma physics, Magnetic fields, High frequency, Electric discharges, Energy.

Contents:
Herculean cloud, by G. Ostroumov
The golden apple of success, by G. Ostroumov
##Nuclear synthesis, by V. S. Emel'yanov.

Bald[a]in, A. M., Gol'danskii, V. I., and Rozental', I. L.
KINEMATICS OF NUCLEAR REACTIONS, tr. by W. E. Jones. 1962, 303p.
Order from PP $6.50

Trans. of mono. [Kinematika Yadernykh Reaktsii, Moscow, 1959, 226p.].

DESCRIPTORS: *Nuclear reactions, Mechanics, *Quantum mechanics, *Particles.

Dzhelepov, B. S. and Dranitsyna, G. F.
SYSTEMATICS OF BETA-DECAY ENERGIES. International Series of Monographs on Nuclear Energy, Div. 2, v. 7. May 62, 72p.

Trans. of mono. [Sistematika Energii Beta-Raspada, Moscow/Leningrad, 1960].

DESCRIPTORS: Radioactive decay, *Beta decay, Energy, Mathematical analysis, *Mass spectroscopy, Atomic orbitals, Atomic number, Atomic mass unit.

Grinberg, A. P.
THE MICROTRON. 16 Mar 62 [68]p. 63 refs.
FTD-TT-62-211; AD-274 060.
Order from OTS or SLA $6.60 62-24282

Unedited rough draft trans. of Uspekhi Fizicheskikh Nauk (USSR) 1961, v. 75, no. 3, p. 421-458.

DESCRIPTORS: *Electron accelerators, Cavity resonators, Electric fields.

The microtron is a cycle resonance electron-accelerator having a constant (in time) master magnetic field. Electrons are accelerated by a high-frequency electrical field created in a hollow resonant cavity; a special type of resonance acceleration is used: resonance with a variable multiplicity factor. The operation of the microtron is treated. (Author)

Ito, Masukuni and Nishidoi, Mutsumi.
TREATMENT OF RADIOACTIVE WASTE WITH ION EXCHANGE MEMBRANE ELECTRODIALYZER.
July 62, 24p.
Order from OTS $0.50 AEC-tr-5079

Trans. of [Nihon Genshiryoku Kenkyujo] (Japan). JAERI rept. 1012, 1960.

DESCRIPTORS: *Radioactive waste disposal, *Ion exchange, Membranes, *Electrodialysis, Desalination, Evaporation, Aluminum compounds, Hydroxides, Electrolysis.

The liquid radioactive waste, from which suspended solid is removed beforehand by floc of $Al(OH)_3$ produced in electrolysis of Al-metal, is treated in an electrodialyzer with ion exchange membranes. The liquid thus desalted is then subjected to ion exchange in ion exchange columns as the final treatment. The activity can be thus reduced economically to the permissible concentration of discharged liquid. When the waste liquid, which was concentrated by electrodialysis, is stored after being concentrated and solidified in the evaporator the treatment expense is comparatively small. Since it was confirmed, as a result of experiment, that the electric power expenses required in the desalting concentration by electrodialysis are small, this treatment process can be said to be considerably promising in the aspect of treatment of radioactive waste liquid, too.

Lindner, R. and Schmitz, F.
DIFFUSION OF URANIUM-233 IN URANIUM DIOXIDE.
[1962] 8p.
Order from ATS $12.75 ATS-13P62G

Trans. of Z[eitschrift für] Naturforschung (West Germany), 1961, v. 16a, p. 1373-1378.

DESCRIPTORS: *Radiochemistry, *Uranium, Uranium compounds, Dioxides, *Diffusion.

Schmets, J.
REPROCESSING OF IRRADIATED URANIUM. Quarterly report no. 2, July-Sep 61, on Contract 049-61-4 RDB. [1962] 59p. 15 refs.
Order from OTS or SLA $5.60 EURAEC-207

Trans. of a rept. from Centre d'Étude de l'Énergie Nucléaire, Brussels (Belgium) Nov 61.

DESCRIPTORS: *Reactor fuels, *Uranium, Processing, Gravimetric analysis, Chlorination, Fluorination, Reaction kinetics, *Plutonium, *Fission products, *Powder metallurgy.

Reduction and chlorination reactions were studied by thermogravimetry, in order to improve the cycle of retreatment by chlorination. Research was started on the transformation of chlorides into fluorides. A study was made on the reduction of U_3O_8 in the presence of alumina and of the transformation of UO_2 and UC into UF_4. The UC UF_4 reaction makes it possible to eliminate most of the fission iodine at high temperature. Sintered UO_2 is now subjected to complete retreatment cycles. The results are very encouraging. The characteristics of the UF_6 distilling column are being studied; concordance with the theoretical estimates is very good. (Author)

Sube, Ralph, ed.
DICTIONARY OF NUCLEAR PHYSICS AND TECHNOLOGY IN ENGLISH, FRENCH, GERMAN AND RUSSIAN. May 62, 1600p.
Order from PP $35.00

DESCRIPTORS: *Dictionaries, *Nuclear physics, Nuclear engineering, Mathematics, Physics, Chemistry, Metallurgy, Electronics.

Elementary Particles

Asada, T., Kikuchi, R. and others.
SCATTERING OF γ-RAYS IN A SHIELD LABYRINTH.
[1962] 11p.
Order from ATS $16.90 ATS-36P61J

Trans. of Nihon Genshiryoku Gakkaishi (Japan) 1960, v. 2, no. 5, p. 245-252.

DESCRIPTORS: Shielding, Electromagnetic shielding, *Scattering

Cherenkov, P. A.
RADIATION OF ULTRALIGHT SPEED CHARGED PARTICLES AND ITS UTILIZATION IN THE PHYSICS OF HIGH ENERGY PARTICLES. 6 Aug 62 [16]p. (Eng. refs. omitted) 5 refs. FTD-TT-62-846.
Order from OTS or SLA $1.60 62-33071

Unedited rough draft trans. of #Akademiya Nauk SSSR. Izvestiya. Seriya Fizicheskaya, 1962, v. 26, no. 1, p. 14-20.

DESCRIPTORS: *Particles, Physical properties, Ultraviolet radiation, Particle accelerators, Radiation counters, Physics, Nuclear physics.

Instruments and Installations

Amaev, A. D. and Lebedev, L. M.
TESTING MACHINES FOR INVESTIGATING THE MECHANICAL PROPERTIES OF IRRADIATED MATERIALS. [1962] [14]p. NSF-62-35(5); JPRS: R-1882.
Order from OTS or SLA $1.60 62-32329

Trans. of mono. Ispytatel'nye Mashiny dlya Izucheniya Mekhanicheskikh Svoistv Obluchennykh Materialov, Moscow, 1960, 15p.

DESCRIPTORS: *Radiation instruments, Test equipment, Tensometers, *Remote control systems, Specifications, Materials, Mechanical properties, Hardness.

The article presents a brief description and technical characteristics of a tension testing machine for testing small specimens at high temperatures (MB-150B type), an universal testing machine with remote control (YMD-5 type), and an instrument for measuring the surface hardness by a diamond pyramid or steel ball (TKC-2 type). The machines are operated in a "hot" metallurgical laboratory and serve for investigation of mechanical properties of the irradiated materials. (Author)

Amelinckx, S. and others.
SOLID STATE NEUTRON DETECTOR. [Quarterly report no. 5] 1 Oct-31 Dec 61, on Contract 079-61-10 RDE [1962] 15p. 3 refs.
Order from OTS and SLA $1.60 EURAEC-246

Trans. of a rept. from Centre d'Étude de l'Énergie Nucléaire, Brussels (Belgium) [1962].

DESCRIPTORS: *Semiconductors, *Solid state physics, *Neutron detectors, *Silicon compounds, Carbides, Diodes, Radiation damage, Hall effect, Resistance, Spectrographic analysis.

The radiation damage program of homogeneous SiC and diodes was continued. Measurements were made of Hall effect and resistivity on a number of p-type crystals of SiC in a temperature range between 300°K and 1300°K. From the temperature dependence of free hole concentration, an activation energy of 0.31 eV for the acceptor impurities has been deduced. The Hall mobility μ decreases from about 40 cm^2V^{-1} at 300°K to 2.7 $cm^2V^{-1}sec^{-1}$ at 1000°K. A brief discussion of the scattering mechanism for the holes in SiC as proposed by H. J. Van Daal, has been given. The experimentally found Hall mobility curve can be explained by the combination of three scattering mechanisms, scattering by optical phonons, and acoustical phonons and by charged impurity centers. Photospectrometric measurements for the study of color centers introduced by reactor irradiation are in progress. The SiC crystals, recently received from the Philips Research Laboratories, are transparent in the visible region of the light spectrum. Measurements of lifetimes by means of a high frequency method were started. (Author)

Santora, Vittoria.
HIGH PERFORMANCE MEASUREMENTS OF C14 AND H3 RADIOACTIVITY IN ORGANIC COMPOUNDS. [1962] 8p. (figs. omitted) 3 refs.
Order from SLA $1.10 62-16456

Trans. of Ricerca Scientifica (Italy) [1959] v. 29, no. 11, p. 2420-2426.

DESCRIPTORS: *Radiochemistry, Radioactive isotopes, *Carbon, *Tritium, Organic compounds, *Radiation counters.

Nuclear Engineering and Power

DEVICE FOR THE EXTRACTION OF THE HEAT PRODUCED IN NUCLEAR REACTORS. Sep 62 (drawings omitted).
Order from INFOSERV $10.00

Trans. (text only) of French patent 1, 162, 270, by Société Rateau S. A., 1958.

DESCRIPTORS: *Nuclear reactors, Cooling, Heat transfer, *Heat exchangers.

ELECTRICAL RESISTIVITY MEASUREMENTS OF SINTERED UO_2. Special rept. no. 2. [1962] 33p. 14 refs.
Order from OTS or SLA $3.60 EURAEC-213

Trans. of rept. from Commissariat à l'Énergie Atomique, Paris (France) Oct 61.

DESCRIPTORS: *Reactor fuels, *Uranium compounds, Niobium compounds, Thorium compounds, Oxides, Sodium compounds, Fluorides, Sintering, Electrical properties, Resistance, *Powder metallurgy.

The electrical resistivities of sintered uranium dioxide bodies were measured between room temperature and 600°C. The effect of powder preparation, compacting pressure, sintering temperature, density, oxygen content and oxide additions on the electrical properties of the material was investigated. It is suggested, how the experimental findings may be related to factors which determine the sinterability of the oxide. (Author)

IMPROVEMENT OF HEAT TRANSFER IN BOILING WATER REACTORS. Quarterly rept. no. 1, Apr-June 60. [1962] [16]p. Supersedes TID-12 470.
Order from OTS or SLA $1.60 EURAEC-33

Trans. of a rept. from Société Nationale d'Étude et de Construction de Moteurs d'Aviation, Suresnes (France) 24 Aug 60.

DESCRIPTORS: *Boiling water reactors, *Heat transfer, Nuclear power plants, Liquid cooled, Reactor coolants, Costs, Thermodynamics, Water, Steam, Separation, Fluid flow, Pressure, Measurement, Sampling, Circular coils, Vortices, Hilsch tubes.

PLUTONIUM RECYCLING. Special rept. no. 1. [1962] 55p.
Order from OTS or SLA $5.60 EURAEC-212

Trans. of rept. from Commissariat à l'Énergie Atomique, Paris (France) Aug 61.

DESCRIPTORS: *Reactor fuels, Fuel plates, *Plutonium *Reactor cores, Manufacturing methods, X-ray diffraction analysis, Alloys.

This report describes the manufacture of a set of twenty plutonium fuel elements intended for a study of the evolution of plutonium in the reactor. Each important stage of manufacture or verification is analysed. The study of the templets and twenty napkin rings by oscillation in Minerve has shown a good grouping of the masses of plutonium of about the value of 1 gram per core which had been aimed at. It was also possible to disperse small quantities of plutonium in an homogeneous way in a canned alloy and with a good approximation of the value aimed at. The greatest dilution reaches 0.01 g of Pu in a canned plate of 27.7 grams. (Author)

STATISTICAL METHODS FOR HOT CHANNEL AND HOT SPOT CALCULATION. Quarterly rept. no. 1, Nov 60-Mar 61, on Contract 035-60-11-RDI. [1962] 66p. 23 refs.
Order from OTS or SLA $6.60 EURAEC-108

Trans. of rept. from FIAT, S. A., Turrin (Italy) 28 Apr 61.

DESCRIPTORS: *Reactor fuels, *Reactor cores, Temperature, Mechanical properties, Hydraulic systems, *Statistical analysis.

Hot spot and hot channel correction factors are to be rigorously defined and analyzed and the statistical properties of each thermal, mechanical or hydraulic parameter (subfactor) are to be determined. Ways will be sought for combining the randomly varying subfactors and statistical analyses will be made for the nuclear and the engineering subfactors.

STATISTICAL METHODS FOR HOT CHANNEL AND HOT SPOT CALCULATION. Quarterly progress rept. no. 3, 1 July-30 Sep 61, on Contract 035-60-11 RDI. [1962] 35p.
Order from OTS or SLA $3.60 EURAEC-191

Trans. of rept. from FIAT, S. A., Turin (Italy) 31 Oct 61.

DESCRIPTORS: *Reactor fuels, *Reactor cores, Models (Simulations), Temperature, Boiling, Pressure, Hydraulic systems, *Statistical analysis.

A new model (called "spot" model) was developed to take into account the statistical deviations of design parameters from their nominal value. In the spot model the reactor core, or a channel of it, is divided in a certain number of small regions ("spots"); in each of them every independent design parameter such as fuel density and enrichment and geometric dimensions being characterized by a fixed statistical distribution around the nominal value. Every parameter in a certain region is statistically independent from the values of all other parameters in all other core (or channel) regions. Formula were set up, using a linearization procedure, for the distribution and probability function of (a) enthalpy and bulk temperature, (b) quality and void fraction, (c) points of inception of local and bulk boiling, and (d) various partial pressure drops in heating, local and bulk boiling regimes. From a statistical intersection of the total pressure drop curve versus total mass flow rate in the core with the entire system pressure drop-flow characteristic curve, the distribution of the different mass rate of flow and pressure drops in every channels could be found. An analitical procedure is being developed which will find the probability functions of "maximum" type parameters (for example: maximum surface temperature, maximum heat centerline temperature, maximum heat velocity or "burnout" flux). (Author) (See also 62-33160)

STATISTICAL METHODS FOR HOT CHANNEL AND HOT SPOT CALCULATION. Quarterly progress rept. no. 4, 1 Oct-31 Dec 61, on Contract 035-60-11 RDI. [1962] 32p. 2 refs.
Order from OTS or SLA $3.60 EURAEC-264

Trans. of rept. from FIAT, S. A., Turin(Italy) 31 Jan 62.

DESCRIPTORS: *Reactor fuels, *Reactor cores, Enthalpy, Boiling, Temperature, Pressure, Hydraulic systems, Coding, *Statistical analysis.

A statistical hot channel (SHOC) code was developed, that computes the probality and the distribution functions of the most important thermal and hydraulic variables (exit enthalpy, points of inception of local and bulk boiling, flow rate and pressure drop, maximum channel surface temperature, maximum fuel temperature, burnout flux). This code is based on the "spot model" which utilize a sampling technique of the Monte Carlo type. A study of aleatory-function theory led to the introduction of random-noise technique to the stationary and time dependent behaviour, of a fuel channel. By representing this channel with a suitable model, which treats the random fluctuation in the independent parameters in a way similar to a "noise", the power spectral density of the proposed noise is evaluated. Through the transfer function of the model, it is then possible to know the spectral density and therefore all the statistical properties of the dependent thermal and hydraulic parameters. The probabilistic time evaluation of a one velocity bare reactor whose cross sections have been alterated at a certain time in a statistical manner showed that the average value of the time dependent flux is different from the function obtained by averaging first over the cross sections. (See also 62-32384)

URANIUM OXIDE EXTRUSION. Quarterly rept. no. 3 on Contract [(001-59-9-RDF). 15 June 60, 22p. Supersedes TID-12484.
Order from OTS or SLA $2.60 EURAEC-14

Trans. of rept. from Compagnie Industrielle des Combustibles Atomiques Frittés (France).

DESCRIPTORS: *Uranium compounds, *Oxides, Powders, Extrusion, Sintering, Cylindrical bodies, Rods, *Fuel rods, Production, Tests.

URANIUM OXIDE EXTRUSION. Quarterly rept. no. 4 on Contract [001-59-9-RDF]. 15 Sep 60 [16]p. Supersedes TID-12485.
Order from OTS or SLA $1.60 EURAEC-15

Trans. of rept. from Compagnie Industrielle des Combustibles Atomiques Frittés (France).

DESCRIPTORS: *Uranium compounds, *Oxides, Powders, *Extrusion, Sintering, Cylindrical bodies, Rods, *Fuel rods, Production, Tests.

Bois, B. Bailly du and Naudet, R.
EL 4: CHOICE OF PRINCIPAL PARAMETERS. [1961] 28p.
Order from OTS or SLA $2.60 AEC-tr-4194

Trans. of [Commissariat à l'Énergie Atomique] (France) S. P. M. no. 620, 10 Mar 60.

DESCRIPTORS: *Nuclear reactors, Heavy water reactors, Test reactors, Reactor fuels, Reactor cores, Fuel elements, Pressure, Power, Fins, Conductivity, Thermodynamics.

Finniston, H. M. and Howe, J. P., eds.
METALLURGY AND FUELS, VOL. 3: BASIC MATERIALS AND PHENOMENA. [Vol. 3 of Progress of Nuclear Energy Series V.] 1962, 496p.
Order from PP $15.00

Trans. of mono. International Conference on the Peaceful Uses of Atomic Energy, no. 2, Geneva, 1958. Proceedings.

DESCRIPTORS: *Nuclear reactors, Fuel elements, *Reactor fuels, *Metallurgy, Solid state physics, Neutron bombardment, Radiation effects, Neutron diffraction analysis, Diffusion theory, Metals, Nuclear physics.

Finniston, H. M. and Howe, J. P., eds.
METALLURGY AND FUELS, VOL. 4: METALLURGY OF NUCLEAR REACTOR COMPONENTS. Vol. 4 of Progress of Nuclear Energy Series V. 1962, 443p.
Order from PP $15.00

Trans. of mono. International Conference on the Peaceful Uses of Atomic Energy, no. 2, Geneva, 1958, Proceedings.

DESCRIPTORS: *Nuclear reactors, Fuel elements, Fuel rods, *Reactor fuels, *Metallurgy, Reactor moderators, Fuel cladding, Reactor control, Corrosion Physical properties.

Hauser, R. and Mercier, J.
URANIUM OXIDE EXTRUSION. Final rept. on Contract (001-59-9-RDF) Jan 61 [29]p. Supersedes TID-12486.
Order from OTS or SLA $2.60 EURAEC-16

Trans. of rept. from Compagnie Industrielle des Combustibles Atomiques Frittés (France).

DESCRIPTORS: *Uranium compounds, *Oxides, Powders, *Extrusion, Sintering, Cylindrical bodies, Rods, *Fuel rods, Production, Tests.

PHYSICS

Biberman, L.
A METHOD FOR THE APPROXIMATE CALCULATION OF THE DIFFUSION OF RESONANCE RADIATION (Priblizhenyi Sposob Ucheta Diffuzuu Rezonanchogo Izlucheniya). 23 Sep 60, 9p. 4 refs. JPRS: 5647.
Order from OTS $0.50 60-41442

Trans. of Akademiya Nauk SSSR. Doklady, 1948, v. 59, no. 4, p. 659-662.

DESCRIPTORS: *Photons, *Resonance, *Diffusion, Resonance absorption, Diffusion theory, Numerical methods and procedures, *Integral equations.

Perel'man, A. Ya.
DIFFUSION DISTILLATION IN A THREE-PHASE POLYDISPERSED SYSTEM. 6 Nov 61 [20]p. 7 refs. JPRS: 10890.
Order from OTS or SLA $1.60 62-13404

Trans. of #Akademiya Nauk SSSR. Izvestiya. Seriya Geofizicheskaya, 1961, no. 8, p. 1214-1223.

DESCRIPTORS: Liquids, *Diffusion, *Fractionation, *Phase studies, Vapors, Drops, Precipitation.

Simasek, Jerzy.
TEMPERATURE DEPENDENCE OF THE DEPTH OF PENETRATION OF A MAGNETIC FIELD INTO SUPERCONDUCTING LEAD. 5 Dec 61 [5]p. JPRS: 11319.
Order from OTS or SLA $1.10 62-19567

Trans. of Acta Physica Polonica, 1961 [v. 20] no. 7, p. 563-565.

DESCRIPTORS: *Cyrogenics, *Superconductors, *Lead, Magnetic fields, Temperature, Permeability.

The temperature dependence of the depth of penetration of a magnetic field into superconducting lead is derived on the basis of measurements of the critical magnetic fields of thin films of lead. Extrapolating the values obtained to $T = 0^{o}$ K, the author obtained the value $\delta_{o} = (4.5 \pm 0.2) \times 10^{-6}$ cm. (Author)

Skvortsov, V. A., Krupnov, A. F., and Naumov, A. I
MOLECULAR GENERATOR WITHOUT A FREEZING SYSTEM. [1961] 2p. 1 ref. MDF S-183.
Order from OTS $0.50 62-11472

Trans. of Izvestiya V[ysshikh] U[chebnykh] Z[avedenii]. Radiofiz[ika] (USSR) 1960, v. 3, no. 6, p. 1128-1129.

DESCRIPTORS: *Generators, Amonia, Molecular beams, Tests

Acoustics

Bugard, Pierre.
THE PROBLEM OF ULTRASOUND. 23 July 62 [18]p. (fig. omitted). JPRS: 14567.
Order from OTS or SLA $1.60 62-32052

Trans. of Concours Médical (France) 1960 [v. 82] no. 21, p. 2645-2650.

DESCRIPTORS: *Ultrasonics, Physical properties, Sources, Production, Ultrasonic properties, Vibration, Chemical reactions, Biology, Propagation, Industrial medicine, Jet engine noise, *Ultrasonic radiation.

Rozhanskaya, E. V.
ON THE QUESTION OF THE MATHEMATICAL FOUNDATION OF THE THEORY OF INTELLIGIBILITY. [1960] 10p. 5 refs. MDF R-120.
Order from OTS $0.50 62-11581

Trans. of [Akademiya Nauk SSSR]. Kom[issiya] po Akust[ike]. Trudy, 1953, no. 7, p. 53-60.

DESCRIPTORS: *Speech transmission, *Intelligibility, *Voice communication systems, Hearing, Mathematical analysis

Electricity and Magnetism

ARRANGEMENT FOR PREVENTING THE WEAKENING OF THE MAGNETIC FLUX OF PERMANENT MAGNETS OF ELECTRICAL MACHINES. Sep 62 (drawings omitted).
Order from INFOSERV $10.00

Trans. (text only) of German patent 742,360, by Sachsenwerk, Licht- und Kraft-AG[1943].

DESCRIPTORS: *Magnets, Magnetic properties, Control, Electric machines.

PERMANENT MAGNET SYSTEM, ESPECIALLY FOR ELECTRICAL MACHINES AND DEVICES. Sep 62 (drawings omitted).
Order from INFOSERV $10.00

Trans. (text only) of German patent 715,748, by Deutsche Edelstahlwerke AG [1942].
DESCRIPTORS: *Magnets, Design, Electrical equipment, Electric machines.

Breitling, W.
A GRAPHIC METHOD FOR THE DETERMINATION OF THE MOST FAVORABLE OPERATING POINT OF PERMANENT MAGNET SYSTEMS. [1962] 5p. (refs. figs. omitted).
Order from SLA $1.10 62-16722

Trans. of Arch[iv] f[ür] Elektrot[echnik] (Germany) 1952, v. 40, no. 6, p. 366-369.

DESCRIPTORS: *Magnets, Magnetic fields, Statistical analysis.

Feistel, E.
MAGNETIZING OF PERMANENT MAGNETS USING AN IMPULSE MAGNETIZER. [1962] [10]p. 6 refs.
Order from SLA $1.10 62-10901

Trans. of Feinwerktechnik (West Germany) 1961, v. 65, no. 2, p. 63-66.

DESCRIPTORS: *Magnets, Capacitors, Magnet coils, Pulse generators

After an introductory consideration of the development of permanent magnet materials and the problems arising in their magnetization, a magnetization apparatus is described in which the energy of a condenser charge is utilized. Impulse magnetization is always the sole possibility, where permanent magnets and magnet systems with very narrow pole gaps, high coercive field strengths, and complicated shapes are concerned. The peculiarities of these impulse magnetizers and their auxiliary apparatus are discussed with respect to the advantages inherent with them. (Author)

Gubkin, A. N. and Lebedev, P. N.
THE ELECTRETS. 21 Jan 60 [11]p. 6 refs. USASIA: SC-47B/59; JPRS: 246-D.
Order from OTS or SLA $1.60 62-32783

Trans. of Priroda (USSR) 1959 [v. 48] no. 5, p. 77-81.

DESCRIPTORS: *Electrets, Dielectrics, Ceramics, Electric fields, Microphones, Generators, Electrometers, Memory devices, Electrophotography.

A purely external analogy exists between permanent magnets and electrets: the electret is analogous to a magnetic sheet. This analogy, however, does not arise from the framework of ordinary concepts of formal external similarity, and occurs between a dielectric placed in an electric field and a paramagnetic substance placed in a magnetic field. Various applications of this principle are described.

Kopplin, H.
THE DYNAMIC BEHAVIOUR OF ARCS IN AN ALTERNATING CURRENT CIRCUIT. Oct 62.
Order from BISI £6 5s BISI-2900

Trans. of Archiv für Elektrotechnik (Germany) 1962, v. 47, no. 1, p. 47-60.

DESCRIPTORS: *Electric arcs, Dynamics, *Alternating current, Differential equations.

Okhremenko, N. M.
ELECTROMAGNETIC PHENOMENA IN FLAT-TYPE INDUCTION PUMPS FOR MOLTEN METAL. Sep 62 [7]p. 12 refs.
Order from ARS in Its Journal, v. 32, no. 9, $3.00

Trans. of Elektrichestvo (USSR) 1960, no. 3, p. 48-54.

DESCRIPTORS: *Electromagnetic pumps, Inductance, Pumps, Induction motors, Liquid metals, *Liquid metal pumps, Design.

Molecular Physics and Spectroscopy

ATLAS OF THE AIRGLOW SPECTRUM λλ 3000 - 12400 Angstroms. 24 Sep 62 [37]p. 52 refs. JPRS: 15412.
Order from OTS or SLA $3.60 62-33136

Trans. of mono. Atlas Spektra Izlucheniya Nochnogo Neba λλ 3000 - 12400 Å, Moscow, 1962, 31p.

DESCRIPTORS: *Atmospherics, Sky brightness, *Spectrographic data, Hydroxides, Oxygen, Sodium, Helium, Hydrogen, Bibliography.

Babushkin, A. A., Gribov, L. A. and others.
STRUCTURE OF MOLECULAR COMPOUNDS OF BORON TRIFLUORIDE WITH METHANOL, ETHANOL, AND WATER. Pt. 2 of Investigation of Vibration Spectra of Molecular Compounds of Boron Trifluoride with Nitrogen and Oxygen-Containing Substances. [1962] 9p.
Order from ATS $16.00 ATS-34P62R

Trans. of Optika i Spektroskopiya (USSR) 1958, v. 5, no. 3, p. 256-263.

DESCRIPTORS: *Spectrographic analysis, *Vibration, *Boron compounds, *Fluorides, Nitrogen, Oxygen, Methanols, Ethanols, Water

Barachevskii, V. A., Kotov, E. I., and Terenin, A. N.
SPECTRA OF MOLECULAR IONS OF ANTHRACENE FORMED IN VACUUM ADSORPTION. [1962] 5p.
Order from ATS $7.50 ATS-88P61R

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1962, v. 143, no. 2, p. 362-365.

DESCRIPTORS: *Anthracenes, Molecules, Ions, Spectrographic analysis, Vacuum systems, Adsorption.

Chupakhin, M. S. and Gradshtain, E.
EFFECT OF DIRECTED FORMATION OF IONS IN A THREE-FILAMENT MASS SPECTROMETER ION SOURCE. [1962] 4p.
Order from ATS $5.25 ATS-62P62R

Trans. of Akad[emiya] Nauk SSSR. Dokl[ady] 1962, v. 142, no. 2, p. 337-339.
DESCRIPTORS: *Mass spectrometers, *Ion sources, Filaments.

El'sting, O. G.
EQUIPMENT FOR STUDYING ELECTRON PARAMAGNETIC RESONANCE AT METER WAVELENGTHS, tr. by R. P. Illwitzer. 5 Apr 61, 4p. 5 ref. APL/JHU TG-230-T227.
Order from OTS $0.50 61-31534

Trans. of #Pribory i Tekhnika Eksperimenta (USSR) 1960, no. 5, p. 64-66.

DESCRIPTORS: *Electrons, *Paramagnetic resonance, Microwave spectroscopy, Radiofrequency spectrum analyzers, Detection, Sensitivity, Resonance.

Evseev, A. M.
RADIAL DISTRIBUTION OF ATOMS IN A LIQUID. [1962].
Order from FRI FRI Trans-173

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1960, v. 131, no. 4, p. 789-792.

DESCRIPTORS: *Liquids, *Atomic radii, Distribution, *Atomic structure

Hintenberger, H.
MASS SPECTROSCOPIC ANALYSIS OF SOLID BODIES. Sep 62, 2700 words.
Order from HB $6.80 HB-5668

Trans. of Archiv [für das] Eisenhüttenwesen (West Germany) 1962, v. 33, no. 6, p. 355-358.

DESCRIPTORS: *Mass spectroscopy, *Steel, *Silicon, *Aluminum, Quantitative analysis.

Jokl, Jan.
SIMPLE APPARATUS FOR AUTOMATIC RECORDING OF FLUORESCENCE SPECTRA (Jednoduche Zarizeni pro Automatickou Registraci Fluorescencnich Spekter) tr. by Paul DePorte. 28 June 60, 10p. (2 figs. omitted) 13 refs. NIH no. 6-20-60.
Order from OTS or SLA $1.10 60-23056

Trans. of Chemicke Listy (Czechoslovakia) 1958, v. 52, no. 7, p. 1370-1372.

DESCRIPTORS: *Fluorescence, Measurement, *Spectrophotometers, *Photoelectric cells, Photomultipliers, Electronic recording systems.

A simple apparatus is described for automatic registration of fluorescence spectra, with which one can measure the fluorescence spectra of substances under study with greater speed and higher accuracy than by spectrographic methods. The apparatus can also be used for other absorption and emission measurements. (Author)

Karaev, R. A.
APPLICABILITY OF INTEGRAL METHODS TO GAS TRANSFER THEORY. Sep 62 [3]p. 4 refs.
Order from ARS in Its Journal, v. 32, no. 9, $3.00

Trans. of Akademiya Nauk Azerbaidzhanskoi SSR [Baku]. Doklady, 1960, v. 16, no. 6, p. 535-539.

DESCRIPTORS: *Gases, *Molecules, Absorption, Gas flow, Boundary layer, Viscosity, Thermal conductivity, Statistical functions, *Integral equations, Differential equations.

Kvater, G. S. and Meister, T. G.
ABSOLUTE VALUES OF TRANSITION PROBABILITIES FOR MEMBERS OF THE PRINCIPAL SERIES OF CESIUM. Aug 60, 33p.
Order from K-H $41.25 K-H 10235

Trans. of Leningrad U. Vestnik (USSR) [1952, v. 7, no. 9, p. 137-158].
Another trans. is available from LC or SLA mi$3.30, ph$7.80 as 61-10553 [1961] [40]p.

DESCRIPTORS: *Cesium, Spectrographic analysis, *Electron transistions.

Malenkov, G. G.
ON THE STRUCTURE OF LIQUID WATER. [1962] 5p. 12 refs.
Order from OTS or SLA $1.10 62-14443

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1961, v. 137, no. 6, p. 1334-1335.

DESCRIPTORS: *Water, Liquids, Molecules, Hydrogen, Chemical bonds.

The structure of liquid water derived from the assumption of cis-bonds between molecules is in good agreement with Pauling's results and permits to draw the conclusion that dodecahedral formations of water molecules exist. (Author)

Osipov, A. I.
TOWARDS A THEORY OF SHOCK EXCITATION OF VIBRATION LEVELS OF DIATOMIC MOLECULES (K Teorii Udarnogo Vosbushdeniya Kolebatelnykh Urovnei Dvukhatomnykh Molekul). [1961] [15]p. 10 refs.
Order from OTS or SLA $1.60 61-28227

Trans. of Moscow U. Vestnik. Seriya Matematiki, Mekhaniki, Astronomii, Fiziki, Khimii (USSR) 1958 [v. 13] no. 4, p. 97-108.

DESCRIPTORS: *Molecules, Vibration, Excitation, Shock waves, Quantum statistics, Probability, *Molecular spectroscopy, Theory.

Reitz, A. W.
RAMAN EFFECT STUDIES, REPT. 57. [1962] 29p.
Order from K-H $36.25 K-H 5147 d

Trans. of Zeitschrift für Physikalische Chemie [Leipzig] (East Germany) 1936, v. 33[B] p. 179-195.

DESCRIPTORS: *Raman spectroscopy.

Reitz, A. W.
RAMAN EFFECT STUDIES. 63. THE 5-MEMBER RING (PT. 2 MODEL EXPERIMENTS). [1962] 30p.
Order from K-H $37.50 K-H 5147 b

Trans. of Z[eitschrift für] Physik[alische] Chem[ie, Leipzig] (Germany) 1937, v. 35B, p. 363-381.

DESCRIPTORS: *Raman spectroscopy, Molecular structure, Models (Simulations).

Septier, Albert.
STUDY OF A SLIT ELECTRONIC LENS FOR A VELOCITY ANALYZER. [1962] 4p. 2 refs.
Order from SLA $1.10 62-16235

Trans. of Acad[emie des] Sci[ences] Paris. Comptes Rendus (France) 1954, v. 239, no. 5, p. 402-404 (pub. by Gauthier-Villars et Cie., Paris).

DESCRIPTORS: *Electron beams, Velocity, Spectrographic analysis, *Electron lenses.

Shpol'skii, E. V. and Girdzhiyauskaite, E. A.
LUMINESCENCE AND ABSORPTION OF PYRENE AND 3, 4-BENZOPYRENE IN FROZEN SOLUTIONS OF NORMAL PARAFFINS [Lyuminestsentsiya i Pogloshchenie Pirena i 3, 4-Benzpirena v Zamorozhennykh Rastvorakh Normal'nykh Parafinov]. [1962] 24p.
Order from K-H $30.00 K-H 9681-b

Trans. of Optika i Spektroskopiya (USSR) 1958, v. 4 [no. 5] p. 620-630.
Another trans. is available from SLA $2.60 as 61-20484 [1961] 24p.

DESCRIPTORS: *Hydrocarbons, Benzoyl radicals, Solidified gases, Luminescence, Absorption, Spectrographic analysis, Optics, Fluorescence.

For abstract see Technical Translations 7:307, 1962.

Optics

OPTICAL TRANSITION PROBABILITIES: A COLLECTION OF RUSSIAN ARTICLES 1924-60, tr. by R. N. Sen and others. 1962, 470p. refs. PL-480 Comm.
Order from OTS $4.75 61-11437

Trans. of 44 articles from selected Russian periodicals.

DESCRIPTORS: *Optics, *Probability, Perturbation theory, Alkaline earth metals, Alkali metals, Metals, Metallic smoke deposits, Vapors, Steel electrodes, Electrodes, Sparks, Solar atmosphere, Stars, Astrophysics, Atoms, Molecules, Electrons, Electron transitions, Oscillators, Atomic spectrum.

Contents:
Anomalous dispersion. 1. Relations between the dispersion constants in the principal series of potassium, by V. K. Prokof'ev
Anomalous dispersion in vapors of alkaline-earth metals,

by V. K. Prokof'ev
Probabilities of forbidden s, d-transitions in the atoms of the alkali metals, by V. K. Prokof'ev
Anomalous dispersion in lithium vapor, by A. N. Filippov
Anomalous dispersion in zinc and cadmium vapors, by A. N. Filippov
Transition probabilities for the principal series of potassium, by A. N. Filippov
Ratio of the oscillator strengths of the resonance doublet of silver, by I. I. Islamov and A. N. Filippov
Transition probabilities for the subsidiary series of thallium, by V. K. Prokof'ev and A. N. Filippov
Anomalous dispersion in potassium vapor at high temperature, by V. K. Prokof'ev
Anomalous dispersion near the first doublets of the principal series of rubidium and cesium, by V. K. Prokof'ev and G. Shtandel'
Anomalous dispersion in thallium vapors, by G. S. Kvater
Determination of oscillator strengths in atomic spectra, by D. S. Rozhdestvenski and N. P. Penkin
Measurement of relative transition probabilities for Cr II lines and determination of the temperature of a condensed spark between steel electrodes, by E. V. Zagoryanskaya
Absolute transition probabilities for the members of the principal series of cesium, by G. S. Kvater and T. G. Meister
A curve of growth for the sun atmosphere determined from laboratory intensities of Fe I, by L. A. Mitrofanova
Approximate methods for the calculation of optical transition probabilities, by L. A. Vainshtein and B. M. Yavorskii
Application of the many-configuration approximation in the determination of the dipole force for Be-Type and B-Type atoms, by A. B. Bolotin and A. P. Yutsis
The calculation of optical transition probabilities, by M. G. Veselov
Determination of the gf-values for chromium, by L. A. Mitrofanova
Determination of relative gf-values for Ti I and Ti II, by L. A. Mitrofanova
Some atomic parameters of ca II needed in astrophysical calculations, by A. A. Nikitin and G. V. Gordienko
Optical transition probabilities for the subsidiary series of sodium, by E. M. Anderson and others
Transition probabilities for the principal series of yubidium, by G. I. Gol'berg
Sele-consistent Fok field for excited helium atoms, by Ya. I. Vizbaraite and others
Total dipole force in the approximation of incomplete separation of variables for two-electron atoms, by A. P. Yutsis and others
Determination of oscillator strengths by direct measurement of the line widths of a source of finite optical density, by L. M. Biberman
Ratios of f-values of the leading members of the diffuse and sharp series of Al I, by Yu. I. Ostrovskii
Absolute oscillator strengths for the lines of chromium, manganese and copper, by Yu. I. Ostrovskii and N. P. Penkin
On the absolute transition probabilities of the Tl atom, by I. V. Gurvich
Optical transition probabilities for atoms and diatomic molecules, by V. N. Kolesnikov and L. V. Leskov
Comparison of measured and calculated intensities of iron multiplets, by O. A. Mel'nikov
Determination of relative gf-value for Sr I and Sr II
Measurement of lifetimes of the 3^3 P and 3^1 P levels of the helium atom by the method of delayed coincidence, by A. L. Osherovich and I. G. Savich
Measurements of absolute oscillator strengths for Ga I and In I lines, by Yu. I. Ostrovskii and N. P. Penkin
Relative f-values for spectral lines of vanadium and cobalt, by Yu. I. Ostrovskii and N. P. Penkin
Experimental determination of the oscillator strengths for the Pb I lines 4057 and 3683 Å and of the lead abundance in the solar atmosphere, pt. 1. Determination of f-values from emission lines of a hollow cathode, by M. Z. Khokhlov
Oscillator strengths determined from stellar spectra, by M. E. Boyarchuk and A. A. Boyarchuk.

SOVIET GAS LASER RESEARCH: REVIEW OF OPEN LITERATURE. AID Work Assignment no. 14. 10 July 62 [23]p. 20 refs. AID rept. 62-100; AD-282 253.
Order from OTS or SLA $2.60 62-32432

DESCRIPTORS: *Lasers, Scientific research, Bibliography, Cesium, Mercury, Sodium, Vapors, Helium, Optics, Gas discharges, Glow discharges, Mercury lamps, Zinc, Glow lamps, Temperature.

Contents:
Experimental studies
Negative temperature in a mixture of cesium vapor and helium achieved by optical pumping
Negative temperature in a mixture of mercury vapor and a buffer gas achieved by a glow discharge
Negative temperature in a mixture of sodium and mercury vapors achieved by optical pumping
Negative temperature in a mercury-zinc discharge lamp
Parameters of the 6362 Å zinc line in a mercury-zinc gas-discharge lamp
Theoretical studies
Soviet laser scientists.

Yu-16 LUXMETER. 7 Mar 60 [3]p. USASIA SC-59yy/59; JPRS: R-470-D.
Order from OTS or SLA $1.10 62-32718

Trans. of #Pribory i Tekhnika Eksperimenta (USSR) 1959, no. 2, p. 156.

DESCRIPTORS: *Photometers, Fluxmeters, Photoelectric cells, Luminescence, Measurement, Instrumentation.

Bonch-Bruevich, A. M. and Kovalev, V. P. FLUOREMETRIC MEASUREMENTS AT LOW FREQUENCY MODULATION OF LUMINOUR FLUX. Presented at the Conference on Luminescence (no. 6) Feb 58, Leningrad. 7 Mar 60 [7]p. 8 refs. USASIA SC-59m/59; JPRS: R-432-D.
Order from OTS or SLA $1.10 62-32756

Trans. of #Pribory i Tekhnika Eksperimenta (USSR) 1959, no. 2, p. 49-52.

DESCRIPTORS: *Phase meters, *Fluorometers, *Luminescence, Instrumentation, Fluorescence, Low frequency, Frequency modulation.

An instrument for investigating the duration of luminescence lying in the region 10^{-3} to 10^{-7} seconds by a phase method is described. Notions on the use of a modulation method for fluorometric measurements are presented. (Author)

Fursov, V. S.
DIPOLE INTERACTION AND SCATTERING OF LIGHT tr. by Astrid Werner. Nov 62 [6]p. 5 refs.
Order from ARS in Its Journal, v. 32, no. 11, $3.00

Trans. of Moskow U. Vestnik. [Seriya 3: Fizika, Astronomiya] (USSR) 1961 [v. 16] no. 2, p. 60-72.

DESCRIPTORS: *Light, Scattering, Dipole moment, Gases, Molecules, Optics, Field theory, Quantum statistics, Corrections.

Ronzhin, V. V.
USE OF A PHOTOMULTIPLIER FOR MEASURING RADIANT FLUX IN RADIATION-EXCHANGE MODELS WITH ABSORBING MEDIA. Nov 62 [3]p. 3 refs.
Order from ARS in Its Journal, v. 32, no. 11, $3.00

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Priborostroenie (USSR) 1961 [v. 4] no. 1, p. 94-98.
Another trans. is available from OTS or SLA $1.10 as 62-23375, FTD-TT-61-319, 23 Jan 62 [10]p.

DESCRIPTORS: *Light, *Measurement, Instrumentation, Heat transfer, Thermal radiation, Simulation, *Photomultipliers.

For abstract see Technical Translations 8: 182, 1962.

Stoyanov, I. G., Zatseva, P. V., and Bezlepkin, S. V.
CHAMBER FOR ELECTRON MICROSCOPE AND ELECTRON DIFFRACTION INVESTIGATIONS OF OBJECTS IN A GAS MEDIUM. [1959] 2p. MDF-S-140.
Order from OTS $0.50 62-11336

Trans. of Author's Certificate No. 118563 USSR, appl. 16 Oct 57, No. 584676/26.

DESCRIPTORS: *Gases, *Electron diffraction analysis, Electron microscopes, Design, Electron beams, Focusing

The chamber windows for the entrance and exit of the electron beam are made from a formless carbon-collodion film which, in contrast to known formless films, has no porosity, which thus endows it with a good vacuum-insulation quality. The preparation of such a film is made on the surface of a fluid in which the collodion does now swell, as mercury, for example. To impart thermal stability to the film, it is covered by a thin (about 10 A) carbon film. The use of such a film, which hermetically seals the chamber but leaves it transparent, will, in conjunction with a simple commutating system permitting the chamber to be connected alternately either to a vacuum pump or to cylinders containing some kind of gas, make the system completely insulated from the vacuum system of the electron gun. (Extracted from the report)

Veinberg, V. B., Ivanova, L. N., and Sattarov, D. K.
RADIATION-ENERGY CONDUCTORS. 7 Sep 62 [19]p. 14 refs. JPRS: 15176.
Order from OTS or SLA $1.60 62-32860

Trans. of Svetotekhnika (USSR) 1962 [v. 8] no. 7, p. 1-5.

DESCRIPTORS: *Fiber optics, Light transmission, *Optical materials, Photoconductivity.

Solid State Physics

SEMICONDUCTOR MOISTURE METER UTILIZING PELTIER EFFECT. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-15893, 6 Oct 62, by Minneapolis-Honeywell Regulator Co. (U. S.)

DESCRIPTORS: *Semiconductors, *Moisture meters.

SEMICONDUCTOR SURFACE TREATMENT USING ESTERIFYING AGENT. Nov 62.
Order from WBI $2.00

Trans. of main claims, including drawings of published Japanese patent 37-16071, 9 Oct 62, by Pacific Semiconductors, Inc.

DESCRIPTORS: *Semiconductors, Surface area, Esterification.

Devyatkova, E. D. and Stil'bans, L. S.
INVESTIGATION OF THE EFFECT OF ATOMIC IMPURITIES ON THE THERMAL CONDUCTIVITY OF A CRYSTALLINE LATTICE (Issledovanie Vliyaniya Atomnykh Primesei na Teploprovodnost' Kristallicheskoi Reshetki). [1962] [15]p. (foreign text included) 5 refs.
Order from OTS or SLA $1.60 62-16110

Trans. of Zhurnal Tekhnicheskoi Fiziki (USSR) 1952, v. 22, no. 6, p. 968-972.

DESCRIPTORS: *Single crystals, *Lattices, *Potassium compounds, Impurities, Colors, *Thermal conductivity.

The following conclusions were made from the experimental results. The dislocation of the KCl lattice occurring as the result of coloring (for color center concentrations from 0.5 to 5×10^{18} representing 1.5×10^{-3} to 1.5×10^{-2}% relative to the total number of K and Cl ions) increases the thermal resistivity of the crystal by several percent. The magnitude of the variation in thermal resistivity is of the same order of magnitude for all three temperatures investigated. At room temperature (where the experimental precision is within about ± 1%) a definite relationship was obtained between change in thermal resistivity and color center concentration. At lower temperatures the precision of our measurements was lower (about ± 5%) and no quantitative relationships were established. (Author)

Gorelik, C. C., Elyutin, V. P. and others.
ROENTGENOGRAPHIC INVESTIGATION OF THE RECRYSTALLIZATION PROCESSES OF THE BORIDES OF TITANIUM, ZIRCONIUM AND MOLYBDENUM, AND THE CARBIDES OF TITANIUM AND TUNGSTEN.
6 Nov 62 [17]p. 4 refs. JPRS: 16059.
Order from OTS or SLA $1.60 62-33685

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Tsvetnaya Metallurgiya (USSR) 1962 [v. 5] no. 4, p. 143-148.

DESCRIPTORS: *Titanium compounds, *Zirconium compounds, *Molybdenum compounds, *Tungsten compounds, Borides, Carbides, Crystallization, Crystal structure, X-ray photography.

The initial recrystallization temperature of borides, as well as carbides, represents approximately 0.5 of T_{melt}. For metals this ratio does not exceed 0.4. In alloys having MoB and WC as their base and using cobalt as the hardening medium, the temperature of recrystallization is lower than it is in the case of hot-pressed pure MoB and WC. The increase in the content of hardening metal in an alloy lowers the recrystallization temperature of TiB_2, TiC and WC. The relative recrystallization temperature of boride and carbide of titanium, in alloys hardened by cobalt, is practically identical, although the absolute recrystallization temperature of the carbide is higher than that of the boride. Effective energies of activation of recrystallization of the borides are higher than in the case of pure metals, but lower than that of the carbides, and the pre-exponential factors in the case of the borides are smaller--by several orders of magnitude--than in metals, yet higher than in carbides. The influence of a sharp change of the pre-exponent upon the speed of recrystallization is compensated by a change in the effective energy of activation The recrystallization of borides and carbides apparently occurs not by means of diffusion of single atoms, but by the displacement of entire atomic groups. (Author)

Ino, S.
STUDY OF ALUMINA FOR SYNTHETIC GEM MATERIAL: PURIFICATION OF AMMONIUM ALUM BY RECRYSTALLIZATION. [1962] 7p.
Order from ATS $8.50 ATS-37P63J

Trans. of Kogyo Kagaku Zasshi (Japan) 1955, v. 58, p. 181-183.

DESCRIPTORS: *Aluminum compounds, *Oxides, *Synthetic gems, Ammonium radicals, *Purification, Crystallization.

Klassen-Neklyudova, M. V.
PLASTICITY OF CRYSTALS. Aug 62, approx 210p.
Order from CB $12.50

Trans. of unidentified Russian mono., n. p., n. d.

DESCRIPTORS: *Crystals, Lattices, *Plasticity, Deformation, Tensile properties.

Nomm, U. H. and Aidla, A. K.
PHOTOELECTRIC POLARIZATION OF MIXED ZINC AND CADMIUM SULFIDE PHOSPHORS. [1962] 9p. 36 refs.
Order from OTS or SLA $1.10 62-10975

Trans. of [Akademiya Nauk Estonskoi SSR, Tallinn. Institut Fiziki i Astronomii. Trudy] 1960, no. 12, p. 249-261.

DESCRIPTORS: *Semiconductors, *Crystal phosphors, *Zinc compounds, *Cadmium compounds, Sulfides, Mixtures, Photoelectric effect, Polarization, Spectrographic analysis.

An intimate relationship was found between the excitation spectrum of photoelectric polarization and other spectra of the phosphors. It appeared that the internal photoelectric effect in the fundamental absorption band is basically caused by free electrons. (Author)

Renner, T.
THERMODYNAMIC DATA AND VAPOR PRESSURES OF THE MOST IMPORTANT III-V COMPOUNDS. [1961] 11p.
Order from ATS $10.65 ATS-73N49G

Trans. of Solid-State Electronics (U. S.) 1960, v. 1, p. 39-45.

DESCRIPTORS: *Metallic compounds, *Thermodynamics, *Vapor pressure.

Schell, Hans Achim.
ETCHING TEST WITH GALLIUM ARSENIDE (Altversuche an Galliumarsenid). [1962] [7]p. (figs. omitted) 5 refs. H-8086; JPRS (R 1395).
Order from OTS or SLA $1.10 63-13450

Trans. of Zeitschrift für Metallkunde (West Germany) 1957, v. 48, no. 4, p. 158-161.
Another trans. is available from SLA $1.10 as 61-18253 [1961] [10]p. 5 refs.

DESCRIPTORS: *Photoengraving, Tests, *Gallium compounds, *Arsenides, Single crystals, Electrical properties, Deformation, Plasticity, Semiconductors, Dislocations.

An etching technique is described which reveals dislocations in gallium arsenide single crystals.

Terenin, A. N.
ORGANIC DYE SEMICONDUCTORS AND THEIR PHOTOELECTRIC PROPERTIES (Organicheskie Krasiteli-Poluprovodniki i Ikh Fotoelektricheskie Svoistva). [1962] [32]p. 45 refs.
Order from OTS or SLA $3.60 62-14316

Trans. of Vsesoyuz[noe] Khim[icheskoe] Obshchestva. Zhur[nal] (USSR) 1960, v. 5 [no. 5] p. 493-506.
Another trans. is available from OTS or SLA $14.50 in 61-23009, JPRS-9293, 26 May 61 [219]p.

DESCRIPTORS: *Semiconductors, Photoelectric effect, *Dyes, Organic compounds, *Photochemical reactions, Photoconductivity, Gases, Thin films.

Valusek, Milan.
THE THEORY OF THE MOVEMENT OF ELECTRONS IN SEMICONDUCTORS (Strucny Nastin Teorie Pohybu Elektronu v Polovodicich). 12 May 61 [15]p. (figs. omitted) 10 refs. H 8902; JPRS (R-1589-D).
Order from OTS or SLA $1.60 62-25249

Trans. of Slaboproudy Obzor (Czechoslovakia) 1960, v. 21, no. 10, p. 596-602.

DESCRIPTORS: *Semiconductors, *Silicon, *Germanium *Lattices, Electrons, Motion, Theory, Cyclotrons, Resonance, Models (Simulation), Statistical analysis.

The article discusses the movement of electrons in a crystal lattice. A simple band model is here widened by the results obtained through the measurement of the effective mass by cyclotron resonance in silicon and germanium. Fermi statistics are briefly discussed with the assumption that the electron gas is moving in an anisotropic medium. (Author)

Theoretical Physics

Aleksin, V. F.
ON THE STABILITY OF A "STRATIFIED" PLASMA COLUMN: [SELECTED PART]. [1962] [16]p. 4 refs. NSF-62-35 (4); JPRS: R-1881.
Order from OTS or SLA $1.60 62-32330

Trans. of mono. Ob Ustoichivosti "Rassleoennogo" Plazmennogo Shnuram, Khar'kov, 1960, p. 353-368.

DESCRIPTORS: *Plasma physics, Cylindrical bodies, Stability, Magnetic fields, *Magnetohydrodynamics, *Plasma oscillations, Boundary layer, Perturbation theory.

Baranov, V. B.
ACCELERATION OF A CONDUCTING GAS BY A TRAVELING MAGNETIC FIELD. Sep 62 [3]p. 4 refs.
Order from ARS in Its Journal, v. 32, no. 9, $3.00

Trans. of Akademiya Nauk SSSR. Otdel[enie] Tekh-[nicheskikh] Nauk. Izvestiya: Mekhanika i Mashinostroenie, 1960, no. 4, p. 14-18.

DESCRIPTORS: *Gases, Conductivity, Velocity, Density, Pressure, Temperature, *Acceleration, *Magnetic fields, *Magnetohydrodynamics, Differential equations, Electromagnetic fields, Plasma physics.

Thermodynamics

Kutateladze, S. S.
CRITICAL HEAT FLUXES IN THE FLOW OF A WETTING LIQUID WITH THE CORE (OF THE STREAM) BELOW THE SATURATION TEMPERATURE [1962] 10p.
Order from ATS $13.50 ATS-84P62R

Trans. of Nauchnye Doklady Vysshei Shkoly. Energetika (USSR) 1959, no. 2, p. 229-239.

DESCRIPTORS: *Wetting agents, *Fluid flow, Heat, Thermal diffusion, Periodic variations.

Nukiyama, Shiro.
THE MAXIMUM AND MINIMUM VALUES OF HEAT Q TRANSMITTED FROM METAL SURFACE TO BOILING WATER UNDER ATMOSPHERIC PRESSURE (Kinzokumen to Futtosui Tono Kan no Dendatsunetsu no Gokudaine Narabini Gokushone Kettei ho Jikken) tr. by H. Miyamoto. 12 Feb 47 [26]p. 7 refs. F-TS-713-Re; ATI-153 687.
Order from OTS or SLA $2.60 62-25705

Trans. of [Nihon Kikai Gakkai-shi] (Japan) 1934 [v. 36] June [p. 367-374].

DESCRIPTORS: *Heat transfer, *Liquids, Metals, Surfaces, Steam, Boilers, Water, *Boiling, Pressure, Thermodynamics, Water.

The heat Q transmitted from metallic surface to boiling water increases gradually with the increase of the temperature difference ΔT, but when it reaches a certain point Q tends to decrease if ΔT is increased beyond this point. This point is of the maximum value of transmitted heat Q and the existence of such a point is proved experimentally in this report. (Author)

Shifrin, A. S.
VISCOSITY OF STEAM AT ATMOSPHERIC PRESSURE. [1959] 10p. 6 refs. MDF-S-142.
Order from OTS $0.50 62-11335

Trans. of Teploenergetika (USSR) 1959, v. 6, no. 9, p. 22-27.

DESCRIPTORS: *Steam, Viscosity, *Pressure

Results are explained of an experimental investigation of the viscosity of steam at temperatures from 149 to 866°C at atmospheric pressure. A two-capillary method, underlying the investigation, is described. A comparison is made with results of other investigations and equations are proposed which will describe the temperature dependence of the viscosity of steam. (Author)

Vukalovich, M. P., Zubarev, V. N., and Alexandrov, A. A.
EXPERIMENTAL DETERMINATION OF THE SPECIFIC VOLUME OF STEAM AT TEMPERATURES OF 700-900° C AND AT PRESSURES TO 1200 KG/CM^2. [1962] 5p. 9 refs.
Order from OTS or SLA $1.10 62-14896

Trans. of unidentified article from Moscow Energy Institute, 1961 (?).

DESCRIPTORS: *Steam, Volume, Determination *Resistance thermometers, Thermocouples, *High pressure research, Equations of state.

Benediktov, E. A.
PASSAGE OF RADIO WAVES THROUGH THE IONOSPHERE (O Prokhozhdenii Radiovoln Cherez Ionosferu). [1962] [22]p. (foreign text included) 8 refs.
Order from OTS or SLA $2.60 62-14004

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Radiofizika (USSR) 1960, v. 3, no. 1, p. 33-38.

DESCRIPTORS: *Radio waves, *Ionosphere, *Extraterrestrial radio waves, Propagation, Cosmic rays, Radio astronomy, Upper atmosphere, *Ionospheric propagation.

Denisov, N. G.
DIFFRACTION OF ELECTROMAGNETIC WAVES IN A GYROTROPIC LAYER CONTAINING RANDOM INHOMOGENEITIES. Nov 62 [6]p. 11 refs.
Order from ARS in Its Journal, v. 32, no. 11, $3.00

Trans. of #Izvestiya Vysshikh Uchebnykh Zavedenii. Radiofizika (USSR) 1960, v. 3 [no. 3] p. 393-404.
Another trans. is available from OTS $0.50 as 62-11185
MDF D-138 [1960] 14p.

DESCRIPTORS: *Electromagnetic waves, Diffraction, Propagation, Wave transmission, *Ionospheric propagation.

For abstract see Technical Translations 8: 596, 1962.

Denisov, N. G.
STATISTICAL PARAMETERS OF AN ELECTROMAGNETIC WAVE AFTER PASSAGE THROUGH AN INHOMOGENEOUS PLASMA IN A MAGNETIC FIELD. Nov 62 [6]p. 6 refs.
Order from ARS in Its Journal, v. 32, no. 11, $3.00

Trans. of #Izvestiya Vysshikh Uchebnykh Zavedenii. Radiofizika (USSR) 1960, v. 3, no. 4, p. 620-630.
Another trans. is available from OTS $0.50 as 61-31532
APL/JHU TG-230-T236, 3 May 61, 17p.

DESCRIPTORS: *Electromagnetic waves, Propagation, *Plasma physics, Phase modulation, Amplitude modulation, Ionospheric disturbances, *Statistical functions.

For abstract see Technical Translations 6: 799, 1961.

Gershman, B. N.
GROUP VELOCITY OF PLASMA WAVES IN THE PRESENCE OF A MAGNETIC FIELD. Nov 62 [2]p. 4 refs.
Order from ARS in Its Journal, v. 32, no. 11, $3.00

Trans. of #Izvestiya Vysshikh Uchebnykh Zavedenii. Radiofizika (USSR) 1960, v. 3, no. 1, p. 146-148.

DESCRIPTORS: *Plasma plasma, Wave propagation, Velocity, *Magnetic fields, Wave analysis, Partial differential equations.

RESEARCH METHODS, TECHNIQUES AND EQUIPMENT

CZECHOSLOVAK ACADEMY OF SCIENCES, 1962 (INFORMATIONAL HANDBOOK). 31 Oct 62 [78]p. JPRS: 15965.
Order from OTS or SLA $7.60 62-33704

Trans. of mono. Ceskoslovenska Akademie Ved 1962, Prague, Jan 62, 140p.

DESCRIPTORS: *Handbooks, *Scientific organizations, *Czechoslovakia, Scientific personnel, Personnel

FOREIGN DEVELOPMENTS IN MACHINE TRANSLATION AND INFORMATION PROCESSING NO. 109. 22 Oct 62, 27p. JPRS: 15839.
Order from OTS $0.75 62-11793

Trans. of Mekhanizatsiya i Avtomatizatsiya Proizvodstva (USSR) 1962 [v. 16] no. 8, p. 28-32 and 45-46.

DESCRIPTORS: *Machine translation, *Data processing systems, Speech, Language, Coding, Statistical analysis, Reading machines, Information retrieval.

Contents:
Mechanization of sorting large volumes of information, by A. F. Smirnov
Determining letter combinations through statistical analysis of text matter, by K. I. Kurbakov and R. V. Smirnov.

IMPLEMENTATION OF THE 1962 SCIENTIFIC AND TECHNOLOGICAL PROGRAM. 19 Sep 62 [34]p. JPRS: 15349.
Order from OTS or SLA $3.60 62-33148

Trans. of Hoat Dong Khoa Hoc [sic] (North Vietnam) 1962, no. 6, p. 1-9.

DESCRIPTORS: *Scientific research, Vietnam, Social sciences, Geology, Biology, Mathematics, Physics, Chemistry, Engineering, Agriculture, Medicine.

SOVIET SCIENTIFIC ADMINISTRATION, ORGANIZATION, AND POLICY. 14 May 62 [92]p. JPRS: 13788.
Order from OTS or SLA $8.60 62-24710

Trans. of #Zhurnal Analiticheskoi Khimii (USSR) 1961, v. 16, no. 6, p. 657-659; Ekonomicheskaya Gazeta (USSR) 1961, no. 18, p. 20; 1962, no. 3(24) p. 17; from Akademiya Nauk SSSR. Doklady, 1961, v. 141, no. 2; and 14 articles from selected Russian newspapers.

DESCRIPTORS: *Scientific research, Research program administration, Scientific organizations, *Education, Industry, Labor, *Religion, Conferences, Communism, Chemists, Chemical analysis.

Contents:
Science and social progress, by N. Semenov
The role of science in higher education, by V. P. Elyutin
Strengthening the bond between education and labor
Science and industry
Science today and tomorrow, by M. Agoshkov
Science versus religion, by A. Putilin
Science is becoming a decisive force, by S. Starodubtsev
A pledge for the coordination of scientific research, by B. Paremskii
Report on Siberian science, by B. Koltovoi and M. Burenkov
Steps to improve the coordination of scientific research in the Armenian SSR
Man begins to control life processes, by V. Dushechkin
Analytic chemistry and the congress of the communist party of the Soviet Union (no. 12) [sic]
Congress of the Communist Party of the Soviet Union (no. 12) [sic] and the problems of science
Resolutions of the twelfth [sic] Congress of the CPSU and the tasks confronting scientists, by S. R. Sergienko
Science and communism; general assembly of the Academy of Sciences USSR
Leningrad chemists march ahead, by V. Rumyantsev
Soviet scientists to increase their contribution
The strong points of scientific research, by K. Bilyalov.

SOVIET SCIENCE AND EDUCATION. 16 Oct 62 [32]p. JPRS: 15734.
Order from OTS or SLA $3.60 62-33460

Trans. of Terapevticheskii Arkhiv (USSR) 1962 [v. 34] no. 2, p. 121-125; and from Pravda, Moscow (USSR) 1962, 4 Apr, p. 1; 4 May, p. 6; Meditsinskii Rabotnik (USSR) 1962 [v. 25] 9 Jan, p. 3.

DESCRIPTORS: *Science, *Education, Labor, Scientific personnel, *Scientific research, Theses.

Contents:
Science and the higher school
Science turns east: a report from the Siberian department of the Academy of Sciences, by M. Lavrent'ev and I. Vekua
Intelligent utilization of the labor and talent of researchers, by B. Danilov and E. Arapov
Dissertations approved by the higher certifying commission (VAK) in July 61, by M. A. Voskanov.

TRANSLATIONS ON NORTH VIETNAM'S SCIENTIFIC AND TECHNICAL ACTIVITIES. 17 Aug 62 [8]p. JPRS: 14879.
Order from OTS or SLA $1.10 62-32456

Trans. of Y Hoc Thuc Hanh [sic] (North Vietnam) 1962, May, p. 9 (excerpt); Khoa Hoc Thuong Thuc [sic] (North Vietnam) 1962, 10 Apr, p. 7 (gist of the article); To Quoc [sic] (North Vietnam) 1962, June, p. 19.

DESCRIPTORS: *Scientific research, Conferences, *Pediatrics, *Medical research, *Pharmacology, *Vietnam, Science.

Contents:
All-North Vietnam Pediatric Conference (no. 3) Hanoi, 25-27 Jan 62, by Pham Van Cu and Phan Thi Quynh Giao
Association for the propagation of science and technology in Hai Duong province, by Nguyen Huu
Achievements of the pharmacology section of the faculty of medicine.

WASTE DISPOSAL. Progress rept. no. 2, 3rd. Quarter, 1960, on [Contract (010-60-4-RDB)]. 1960, 50p. 6 refs. Supersedes TID-12464.
Order from OTS or SLA $4.60 EURAEC-83

Trans. of rept. from Centre d'Etude de l'Energie Nucléaire (Belgium).

DESCRIPTORS: *Sanitary engineering, Chemical wastes, *Radioactive waste disposal, *Purification, *Incinerators, Solubility, Smokes, Gases, Radioactive wastes, Underground structures, Hydrology, Measurement, Velocity, Water, Migration area, Soils, Fission, Isotopes, *Radioactive isotopes.

Contents:
Purification, incineration and insolubilization of smoke gasses
Incinerator, by R. Lopes Cardozo
Insolubilization of the radioactive concentrates, by P. Dejonghe and N. Van de Voorde
Gas purification
A study of final underground disposal, by L. Baetsle
Measurements of the velocity and the direction of the phreatic water, by W. Maes and J. Souffriau
Study of the migration in the soil of some fission isotopes of long half-life, by L. Baetsle.

Glushkov, V. M.
TO MAKE CYBERNETICS A GENUINE HELPER OF HUMAN METAL ACTIVITY. 17 Oct 62 [7]p. JPRS: 15758.
Order from OTS or SLA $1.10 62-33464

Trans. of Tekhnika Molodezhi (USSR) 1962 [v. 30] no. 6, p. 28-30.

DESCRIPTORS: *Cybernetics, Automation, *Digital computers, Computers, Information theory, Simulation

Itel'son, L. B.
PHILOSOPHICAL PROBLEMS OF CYBERNETICS: REVIEW OF A NEW SOVIET BOOK, ED. by V. A. ILIN AND OTHERS. 22 Oct 62 [13]p. JPRS: 15825.
Order from OTS or SLA $1.60 62-33517

Trans. of Voprosy Filosofii (USSR) 1962 [v. 16] no. 7, p. 163-167 (originally pub. as Filosofskie Voprosy Kibernetiki, Moscow, 1961, 390p.).
A trans. of the original mono. is available from OTS or SLA $19.75 as 62-13719, JPRS-11503, 15 Dec 61 [306]p.

DESCRIPTORS: *Cybernetics, *Philosophy, History, Physiology, Control systems, Control, Labor, Digital computers, Computers, Reflexes, Conditioned reflexes, Social sciences

Kondratov, A.
AUTOMATA, THINKING AND LIFE. 23 Oct 62 [16]p. JPRS: 15851.
Order from OTS or SLA $1.60 62-33607

Trans. of Znanie-Sila (USSR) 1962 [v. 37] no. 6, p. 16-19.

DESCRIPTORS: Automation, *Cybernetics, Reasoning, Biology, Brain, *Digital computers, Computers

Mel'chuk, I. A.
TWO OPERATORS FOR ESTABLISHING CORRESPONDENCES (FOR AUTOMATIC SYNTACTICAL ANALYSIS). Foreign Developments in Machine Translation and Information Processing no. 91. 13 Apr 62 [73]p. 3 refs. JPRS: 13444.
Order from OTS or SLA $7.60 62-23997

Trans. of unidentified mono. (pamphlet) Moscow, 1961, 38p.

DESCRIPTORS: *Machine translation, *Language, Analysis

Two operators are described that are used for establishing correspondences are now being applied in the algorithm for automatic analysis of Russian text matter. The operator "Establishment of Correspondence 1" (which is denoted by SOOTV$_1$) tests for agreement between a long adjective and a substantive. In this case we are concerned only with the agreement of an adjectival modifier and the modified substantive. The operator "Establishment of Correspondence 2" (which is denoted by SOOTV2) tests for agreement between the case governed by a preposition and the case of the substantive. (Author)

Napalkov, A. V.
ON THE PATHS OF CYBERNETICS DEVELOPMENT. 28 Aug 61 [10]p. JPRS: 9985.
Order from OTS or SLA $1.10 61-27860

Trans. from Moskovskii Universitet (USSR) 1961, no. 6(1836) 31 Jan, p. 2.

DESCRIPTORS: *Cybernetics, Digital computers, Computers, Control systems, Brain, Bioelectronics.

Nietyksza, Bronislaw.
CYBERNETICS. 19 Oct 62 [6]p. JPRS: 15789.
Order from OTS or SLA $1.10 62-33529

Trans. of Zdrowie (Poland) 1962 [v. 14] no. 7, p. 10.

DESCRIPTORS: *Cybernetics, Man, Machines, Biology, Information theory.

Pecka, Frantisek.
RESPONSIBILITY OF COMMUNISTS FOR RESEARCH IN CZECHOSLOVAKIA. 29 Oct 62 [25]p. JPRS: 15925.
Order from OTS or SLA $2.60 62-33672

Trans. of Nova Mysl (Czechoslovakia) 1962, no. 7, p. 829-839.

DESCRIPTORS: *Scientific research, Communists, *Czechoslovakia.

Riha, Ladislav.
MANAGEMENT OF SCIENTIFIC AND TECHNICAL DEVELOPMENT. 19 Oct 62 [17]p. JPRS: 15793.
Order from OTS or SLA $1.60 62-33528

Trans. of Nova Mysl (Czechoslavakia) 1962, no. 9, p. 1036-1046.

DESCRIPTORS: Management engineering, Research program administration, *Scientific research, *Czechoslavakia, Science.

Sobolev, S. L. and Lyapunov, A. A.
MATHEMATICAL PROBLEMS OF MODERN CYBERNETICS. 2 Nov 62 [16]p. JPRS: 16008.
Order from OTS or SLA $1.60 62-33709

Trans. of Akademiya Nauk SSSR. Sibirskoe Otdelenie. Izvestiya, 1962, no. 5, p. 3-13.

DESCRIPTORS: *Cybernetics, *Applied mathematics, Mathematics, Mathematical logic, Control systems, Synthesis, Digital computers, Computers, Programming.

Starub, M. and Furrer, H.
A NEW AUTOMATIC SMOKING APPARATUS. [1962] 8p.
Order from K-H $10.00 K-H 3546 e

Trans. of Mitt[eilungen aus dem Gebiete der] Lebensmittelunters [uchungen und Hygiene] (Switzerland) 1954, v. 45, no. 6, p. 473-476.

DESCRIPTORS: *Smokes, Cigarettes, Tobacco, Automatic.

Photographic Equipment

EDI-454 DIASCOPE PROJECTOR. 7 Mar 60 [3]p. USASIA SC-59aaa/59; JPRS: R-472-D.
Order from OTS or SLA $1.10 62-32714

Trans. of #Pribory i Tekhnika Eksperimenta (USSR) 1959, no. 2, p. 158.

DESCRIPTORS: *Slide projectors, *Film projectors, Operation

Preuss, L. E. and Alt, C. E.
EVAPORATION OF METALS IN VACUO AS A FUNCTION OF THEIR DISTRIBUTION ON THE EVAPORATION SURFACE [EXPERIMENTAL RESULTS OF RADIOAUTOGRAPHY AND DISTRILLATION-CAMERA PHOTOGRAPHS, PT. 1 (Die Verdampfung von Metallen im Vakuum in Abhängigkeit von Ihrer Verteilung auf der Verdampfungsunterlage; Experimentelle Ergebnisse Mittels Autoradiographi e und Destillations-Kamera -Aufnahmen, I. Teil)]. [1962].
Order from K-H $31.25 K-H 10798

Trans. of Vakuum-Technik (West Germany) 1960, v. 9, no. 4, p. 93-100.
Another trans. is available from SLA $3.60 as 61-20446 [1961] [32]p.

DESCRIPTORS: *Evaporation, *Metals, Distilling plants, *Vacuum apparatus, Distribution, Surfaces, *Autoradiography, Surface tension, Radioactivity, Condensation, *Cameras, Photographic emulsions, Radioactive isotopes, Thin films, Particle trajectories.

For abstract see Technical Translations 7: 573, 1962.

SOCIAL SCIENCES

INTERNATIONAL COMMUNIST DEVELOPMENTS: [SELECTED] TRANSLATIONS NO. 194. 11 July 62 [45]p. JPRS: 14428.
Order from OTS or SLA $4.60 62-25723

Trans. from le Drapeau Rouge (Belgium) 1962, v. 40, no. 113, 12 June, p. 1 and 4; no. 114, 13 June, p. 4; no. 115, 14 June, p. 4; no. 116, 15 June, p. 4; Voix Ouvrière (Switzerland) 1962, v. 18, no. 24, 16 June, p. 1; Kol Haam (Israel) 1962, 12 June, p. 2.

DESCRIPTORS: *Communism, Growth, Economics, Israel, Communists.

Contents:
The sectarian danger: principal obstacle to our action, by Jean Blume
Transition to socialism by peaceful or violent means, by J. Vincent
Workers' campaigns in Israel and abroad stimulate class struggle, by Esther Wilenska.

SOVIET INDUSTRIAL DEVELOPMENT: [SELECTED] TRANSLATIONS ON SOVIET REGIONAL ECONOMY NO. 14. 9 July 62 [26]p. JPRS: 14413.
Order from OTS or SLA $2.60 63-13092

Trans. of Narodnoe Khozyaistvo Kazakhstana (USSR) 1962 [v. 20] no. 3, p. 11-15; Partiinaya Zhizn' (USSR) 1962, no. 4, p. 31-37; and from Izvestiya (USSR) 1961, 9 May; Lesnaya Promyshlennost' (USSR) 1962, 29 Mar and 26 Apr.

DESCRIPTORS: *Industrial production, *Economics, *Geography, *Agriculture, Labor, *Wood.

Contents:
Two new krays, by S. D. Daulenov
Production planning needs improvement, by M. Stolyarova
The role if industrial workers in the development of agriculture, by N. Martynov
Modern equipment urgently needed in the lumber industry, by M. Petrovskaya
Development of Komi ASSR, by V. Vityazeva.

USSR INDUSTRIAL DEVELOPMENT: SOVIET REGIONAL ECONOMY NO. 21. 13Nov62[39]p. JPRS: 16139.
Order from OTS or SLA $3.60 63-13080

Trans. of 10 selected articles from June-Aug 62 issues of 8 Russian newspapers.

DESCRIPTORS: *Industrial production, *Economics, *Geography, Statistical data, Urban areas, *Railroads, *Cuba, Industrial plants, Construction.

Contents:
Plan fulfillment at important projects
RSFSR production statistics for the first half of the Seven-Year Plan
Construction of the city of Kirishi begun
Freight operations at Daugavpils
Moscow production goes to Cuba
How metal is used in the enterprises
Production in the Urals, by F. Kuzyukov
Planning organization must improve
Azerbaidzhan production during the first half of 62
Ways to improve capital construction in Latvia, by V. P. Lein.

Chosnokov, D. I.
HISTORICAL MATERIALISM AND SCIENTIFIC COMMUNISM. 8 June 62 [9]p. JPRS: 14080.
Order from OTS or SLA $1.10 62-25160

Trans. of Nauchnye Doklady Vysshei Shkoly. [Filosofskie Nauki] (USSR) 1962, no. 2, p. 122-127.

DESCRIPTORS: *Communism, *Science, *Philosophy, History.

Hoffman, E.
STUDIES ON THE ECONOMIC EFFECTIVENESS OF INVESTMENTS AND THE PROFITABILITY OF CENTRAL TELEPHONE OFFICES AND LOCAL MB, CB AND AUTOMATIC NETWORKS. 3 Apr 59 [16]p. (4 figs. omitted). JPRS: L-1591-D.
Order from OTS or SLA $1.60 59-11481

Trans. of Gospodarka Lacznosci (Poland) 1958, no. 7, p. 3-9.

DESCRIPTORS: *Economics, Poland, *Telephone communication systems, Costs, Statistical analysis

Calculation of the coefficients of economic effectiveness of investments and of profitability were based on the formulae of the Economic Research Section and the appropriate institute of the Ministry of Telecommunications. In order to promote accuracy, a supplementary factor was taken into account in the aforementioned formulae, namely, the value of fixed assets after the life estimate of the station had expired. (Author)

Kerimov, D. A., Andreev, N. D. and others.
THE USE OF CYBERNETICS IN LAW. 27 Aug 62 [9]p. JPRS: 14967.
Order from OTS or SLA $1.10 62-32559

Trans. of Leningrad U. Vestnik (USSR) 1962 [v. 17, no. 11] Seriya Ekonomiki, Filosofii i Prava [no. 2] p. 141-144.

DESCRIPTORS: *Cybernetics, *Political science, Data, Processing, Data processing systems, Coding, Language

Konwerska, K.
EFFECTIVENESS OF EXPENDITURES FOR WIRE AND WIRELESS DIFFUSION. 17 Nov 58. [13]p. JPRS(DC)-L-838.
Order from OTS or SLA $1.60 59-11076

Trans. of Gospodarka Lacznosci (Poland) 1957, no. 10, p. 7-10.

DESCRIPTORS: *Economics, Poland, *Telephone communication systems, *Radio communication systems, Costs, Wire, Diffusion.

Musolesi, Amedo.
BOOK INDEXING METHOD, ESPECIALLY FOR DICTIONARIES, YEARBOOKS, ETC., tr. by J. R-P. 24 May 62, 3p. (3 figs. omitted).
Order from OTS or SLA $1.10 62-25031

Trans. of French patent 908,076, gr. 18, cl. 1, appl. filed 5 Dec 44, granted 13 Aug 45, pub. 29 Mar 46.

DESCRIPTORS: *Indexes, *Dictionaries, *Documentation, Reports, Libraries, Subject headings.

The invention consists essentially in providing the first page of each letter with an index projecting outward, on which the corresponding letter is inscribed, like a thumb index, so that it is possible to read on the outside of the closed volume all the letters of the alphabet. The index is combined with supplementary indexes for each letter of the alphabet, said supplementary indexes bearing the initial syllables of most of the words on the corresponding page. (Author)

Ruskova, Pravda.
BULGARIAN TECHNICAL PROGRESS IN THE NEXT 20 YEARS. 26 Oct 62 [8]p. JPRS: 15901.
Order from OTS or SLA $1.10 62-33612

Trans. from Narodna Armiya (Bulgaria) 1962, v. 19, no. 4360, 7 Oct, p. 2.

DESCRIPTORS: *Economics, Bulgaria, Labor, Industrial production, Electrical networks, Automation, Chemical industry.

Strupiechowski, B.
WORK ON THE BRANCHES OF THE MINISTRY PLAN FOR 1958. 10 Nov 58 [11]p. JPRS(NY)-L-469.
Order from OTS or SLA $1.60 59-11029

Trans. of Gospodarka Lacznosci (Poland) 1957, no. 12, p. 1-3.

DESCRIPTORS: *Economics, Poland, *Communication systems, Postal systems, Telephone communication systems, Radio communication systems

Ustinov, V. A.
THE APPLICATION OF ELECTRONICS COMPUTING MACHINES IN HISTORICAL SCIENCE. 8 Nov 62 [30]p. JPRS: 16102.
Order from OTS or SLA $2.60 62-33679

Trans. of Voprosy Istorii (USSR) 1962, no. 8, p. 97-117.

DESCRIPTORS: *Digital computers, Computers, Scheduling, Computer logic, Money, *History, Programming, Archaeology.

In the present article the possibility is examined of solving, by means of modern electronic computing machines, a certain class of problems which arise in various humanistic investigations. This type of problem is characterized by the presence of a large quantity of raw material (historical sources), which must be analyzed simultaneously in the process of investigation, and by a diversity of the different forms in which this material is presented. (Author)

Varvarov, N. A. and Faddeev, E. T.
CONQUISTA COSMICA E SOCIETÀ UMANA (Conquering the World and Human Society), tr. by F. Bresciani. 21p. 5 refs. CNP-49. (text in Italian).
Order from OTS or ETC $1.87 62-26121

Trans. from Voprosy Filosofii (USSR) 1961 [v. 15] no. 8.

DESCRIPTORS: *Sociology, *Political science.

Winklern, Gerhard.
COMPARATIVE STUDY OF ECONOMIC EFFICIENCY IN THE IRON AND STEEL INDUSTRY. 26 Nov 58 [12]p. JPRS Trans. no. L-1215D.
Order from OTS or SLA $1.60 59-11360

Trans. of Neue Hütte (East Germany) 1958, v. 3, no. 9, p. 543-548.

DESCRIPTORS: *Economics, Germany, *Iron industry, *Steel industry, Ores, Fuels, Production, Costs, Labor

BOOK REVIEWS

The following book reviews can be ordered by number from OTS or SLA for $1.10 each. Each review includes, in addition to the material shown, a detailed statement o the coverage of the book and detailed table of contents.

BR-SOV/5922
Pines, Boris Yakovlevich
ESSAYS IN METAL PHYSICS(Ocherki po metallofizike) Khar'kov, Izd-vo Khar'kovskogo gos. univ., 1961. 314p. 5000 copies printed.

BR-SOV/5986
Klyukin, Igor' Ivanovich
NOISE AND SOUND VIBRATION CONTROL ON VESSELS(Bor'ba s shumom i zvukovoy vibratsiyey na sudakh) Leningrad, Sudpromgiz, 1961. 355p. 2800 copies printed.

BR-SOV/5995
Deych, Mikhail Yefimovich
ENGINEERING GAS DYNAMICS(Tekhnicheskaya gazodinamika) 2d ed., rev. Moscow, Gosenergoizdat, 1961. 670p. Errata slip inserted. 12,000 copies printed.

BR-SOV/6017
Borisenko, Aleksandr Ivanovich
ENGINE GAS DYNAMICS(Gazovaya dinamika dvigateley) Moscow, Oborongiz, 1962. 793p. Errata slip inserted. 9000 copies printed.

BR-SOV/6029
Arkhangel skiy, V. T., D. P. Kirnos and others
APPARATUS AND OBSERVATION METHODS AT SEISMIC STATIONS IN THE USSR(Apparatura i metodika nablyudeniy na seysmicheskikh stantsiyakh SSSR) Moscow, Izd-vo AN SSSR, 1962. 166p. Errata Printed on inside back cover. 1500 copies printed.

BR-SOV/6030
Samsonov, G. V., A. T. Pilipenko and others
ANALYSIS OF REFRACTORY COMPOUNDS(Analiz tugoplavkikh soyedineniy) Moscow, Metallurgizdat, 1962. 256p. 3250 copies printed.

BR-SOV/6031
Severdenko, Vasiliy Petrovich, and Stanislav Aleksandrovich Pasechnyy
METAL FOR SHEET FORMING(Metall dlya listovoy shtampovki) Minsk, Izd-vo AN BSSR, 1961. Errata slip inserted. 3250 copies printed.

BR-SOV/6032
Yeremenko, V. N., I. N. Frantsevich and others
SURFACE PHENOMENA IN METALS AND ALLOYS AND THEIR ROLE IN POWDER-METALLURGY PROCESSES(Poverkhnostnyye yavleniya v metallakh i splavakh i ikh rol' v protsessakh poroshkovoy metallurgii) Kiyev, Izd-vo AN USSR, 1961. 213p. 1710 copies printed.

BR-SOV/6038
Kalinnikov, Yevgeniy Sergeyevich
VACUUM IN STEEL MAKING(Vakuum v proizvodstve stali) Moscow, Metallurgizdat, 1962. 159p. Errata slip inserted. 3750 copies printed.

TRANSLATIONS IN PROCESS

ALMANAC OF MINING INDUSTRY AND METALLURGY, 1963, NOS. 1-4.
PL-480 Rudarsko-Metalurski Zbornik (Yugoslavia) 1963, nos. 1-4.

BIOLOGICAL PUBLICATION, 1963 [VOL. ?] NOS. 1-4.
PL-480 Bioloski Glasnik (Yugoslavia) 1963 [v.16] nos.1-4.

BULLETIN OF THE MOSCOW SOCIETY FOR NATURAL RESEARCH. GEOLOGICAL SECTION, 1957, VOL. 32 [62] NOS. 1-3.
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